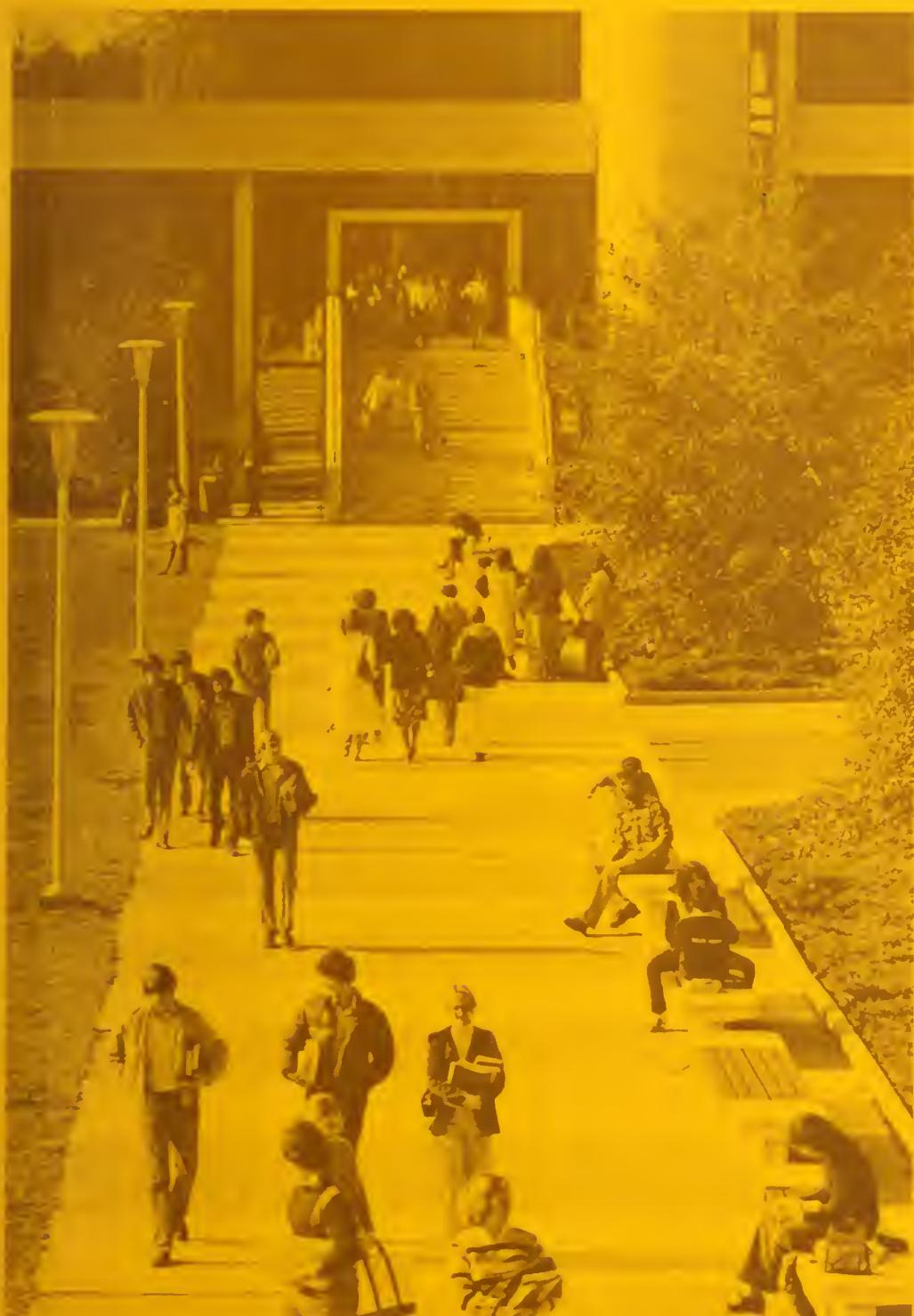


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# Northern Essex Community College

JUST OFF ROUTE 495 AT EXIT 52

HAVERHILL, MA 01830



DAY DIVISION  
**Catalog**

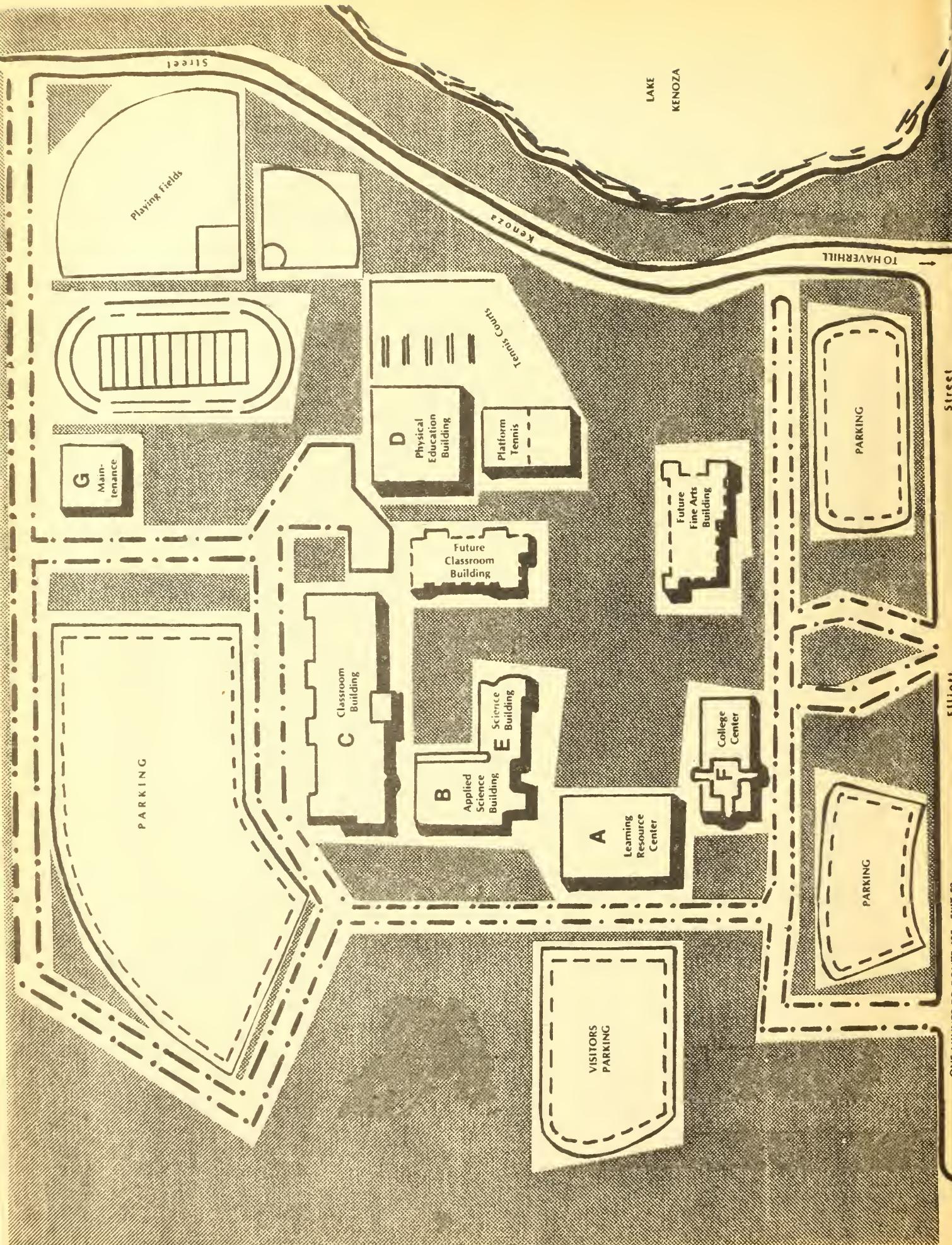
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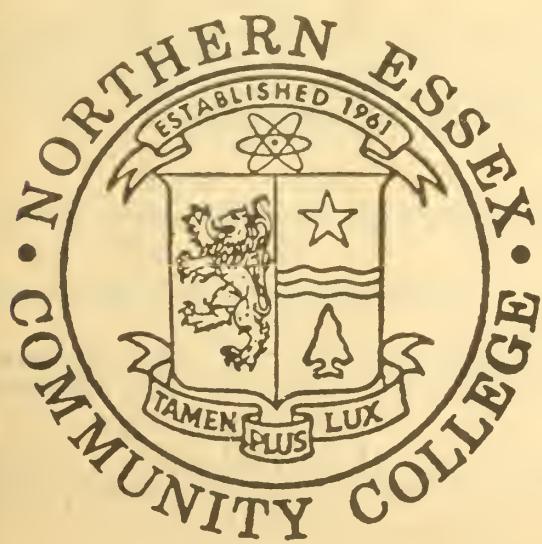
Northern Essex is accredited by the New England Association of Schools and Colleges, Incorporated.

Northern Essex is a member of the New England Association of Schools and Colleges, the American Association of Community and Junior Colleges and the New England Junior College Council.

The following statement of policy has been issued by the President of Northern Essex Community College:

**It is the policy of Northern Essex Community College not to discriminate on the basis of race, color, national or ethnic origin, religion, sex, age, handicap or veteran status. This policy extends to all programs and activities, as required by Federal Law, including Title IX of the Educational Amendments of 1972, Section 504 of the Rehabilitation Act of 1973, and the Viet Nam Era Readjustment Assistance Act of 1974. Inquiries regarding this policy should be addressed to the Affirmative Action/Equal Employment Opportunity Officer, Northern Essex Community College, 100 Elliott Street, Haverhill, MA 01830 [617] 374-0721, extension 172 and/or to the Section 504 Compliance Officer at the same address [extension 296] and/or to the Office of Civil Rights, HEW.**

Northern Essex Community College is established under the Massachusetts Board of Regional Community Colleges as a publicly-supported institution of higher learning.



### **From the President**

A college's catalog serves several purposes: it describes programs and courses, it is used as a guide, a resource and a workbook for students. In the nineteenth century, Thomas Carlyle wrote:

**Let each become all that he was created capable of being; expand, if possible, to his full growth; and show himself at length in his own shape and stature, be these what they may.**

This quotation stands as Northern Essex's message to the community. It represents our belief that we should offer every opportunity for each individual to go just as far as that individual's capabilities and desires allow.

The college's faculty and facilities are geared to provide a helpful and supportive academic atmosphere to all of our students. The catalog will help you in determining the way in which Northern Essex Community College can best assist in the realization of your future. It is a privilege and a pleasure to welcome you to Northern Essex - as a student or as a potential student.

# NORTHERN ESSEX COMMUNITY COLLEGE

100 Elliott Street, Haverhill, Massachusetts 01830

## Associate Degree and Certificate Programs

**BUSINESS:** Accounting, Administrative Assistant, Administrative Assistant: Education Option, Banking, Business Management, Business Transfer, Executive Secretarial, Executive Secretarial: Accounting Option, Executive Secretarial: Legal Option, Executive Secretarial: Medical Option, Executive Secretarial: Technical Option, Office and Business Education: Transfer Option, Food Services Management, Medical Record Technology

**HEALTH PROFESSIONS:** Health Facilities Activity Director Certificate, Nursing [RN], Nursing [RN]: Evening Program, Respiratory Therapy Certificate, Respiratory Therapy Technology, Radiologic Technology

**HUMAN SERVICES:** Early Childhood Education, Educational Assistant: Language Communication Aide, Language Communication Assistant, Fire Protection and Safety Technology, Gerontology, Gerontology Certificate, House Manager Certificate, Law Enforcement, Library Associate, Library Assistant, Mental Health Technology, Nursing Home Administration, Deafness Communication, Deafness Communication Certificate, Security, Security Certificate

**LIBERAL ARTS:** An umbrella program preparing students who plan to transfer into baccalaureate programs with general education and pre-major courses; an exploratory program for students unsure of educational goals

**MATHEMATICS, SCIENCE and TECHNOLOGY:** Civil Technology, Computer Technology, Electronic Technology, Engineering Science, Environmental Technology

## Supplementary Opportunities

**CETA:** Northern Essex Community College is involved with CETA training and employment. Examples of programs are Bilingual Clerk/Typist, Computer/Keypunch Operator, Hospital Ward Clerk, Transitman, Waste Water Plant Operator and Deafness Interpreter.

**DISCOVERY PROGRAM:** Funded program for educationally and financially deprived students

**INTENSIVE E.S.L.:** A program in English as a Second Language for non-native speakers

**G.E.D.:** A program to prepare students to take high school equivalency examinations; Northern Essex is a General Education Development testing center

**SPECIAL STUDENTS:** An educational opportunity for students not yet qualified for specific degree programs

**COLLEGE EXPERIENCE for HIGH SCHOOLERS:** A part-time or full-time program for students still in high school

## The Foundation

The Northern Essex Community College Foundation, Incorporated is non-commercial, non-sectarian and non-partisan. The purpose of the Corporation is to further by all private and legitimate agencies and means the raising of funds to aid and participate in the development and improvement of Northern Essex Community College.

The Corporation receives gifts, legacies and donations from any source. The Corporation seeks to extend the benefits of education offered by the college to all individuals and makes gifts and appropriations from its resources to carry out its purposes and objectives.

The purposes of the Corporation are promoted through educational and research programs directed toward individuals, private and governmental organizations and the community. The purposes of the Corporation are developed through conferences, studies, committees, projects and programs.

The Northern Essex Community College Foundation, Incorporated devotes its endeavors to meeting college needs, meeting student needs, meeting faculty needs, meeting community needs and supporting the educational purpose of the college.

## Massachusetts Board of Regional Community Colleges

**Dr. Jules O. Pagano, President**  
Boston, Massachusetts

**Charles C. D. Hamilton, Chairperson**  
Boston, Massachusetts

**Mrs. Norman Jacobsen, Secretary**  
Concord, Massachusetts

**Gregory R. Anrig**  
Boston, Massachusetts

**John F. Bradshaw**  
Newburyport, Massachusetts

**Dr. Muriel E. Camarra**  
West Boylston

**Dr. John B. Duff**  
Lowell, Massachusetts

**Thomas A. Fulham**  
Boston, Massachusetts

**John T. Hickey**  
Holyoke, Massachusetts

**Mrs. Elizabeth Johnson**  
Mattapan, Massachusetts

**Patrick F. Jones**  
Dorchester, Massachusetts

**David C. Knapp**  
Boston, Massachusetts

**Edward C. McGuire**  
Boston, Massachusetts

**Robert Mattingly \***  
Middletown, Rhode Island

**Kermit Morrissey**  
Boston, Massachusetts

**O. Robert Simha**  
Cambridge, Massachusetts

**Alan Sinclair**  
Somerset, Massachusetts

**Fred T. Thompson**  
North Adams, Massachusetts

## Northern Essex Community College Advisory Board

**Mrs. Marjorie E. Goudreault, Chairperson**  
Haverhill, Massachusetts

**Richard B. Jones**  
Newburyport, Massachusetts

**John Katsaros**  
Haverhill, Massachusetts

**Mrs. Claire Linnehan**  
Haverhill, Massachusetts

**Mrs. Margaret V. O'Connor**  
Lawrence, Massachusetts

**Nicholas Peterson**  
Haverhill, Massachusetts

**Philip Saracusa**  
Lawrence, Massachusetts

**Christopher Swartz \***  
Haverhill, Massachusetts

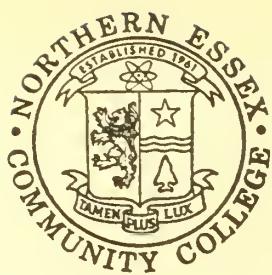
**Mrs. Margaret A. Walsh**  
Haverhill, Massachusetts

**Ms. Carolyn M. Whitaker**  
Bradford, Massachusetts

**Angelo Zappala**  
Lawrence, Massachusetts

\* Student Representative - Bristol Community College

\*Student Representative



#### 1974 FAMILY RIGHTS TO PRIVACY ACT INFORMATION

This act insures confidentiality of your educational records and restricts access by third parties, except as authorized by law. You and your parents, if they are supporting your education, have the right to inspect your educational records, with certain exceptions. If you believe these records are inaccurate you may request correction and if denied, have the right to a hearing and to place a letter of rebuttal in your file if the outcome of that hearing is negative.

The College does not release information about your home address, telephone number, or your parents except as authorized by law. On the other hand, your attendance, name, college, study year, and date of expected graduation are considered information in the public domain that can be released.

However, another category of information is called "directory information." It includes your local telephone number, local residence address, and your local postal address. If you wish to restrict release of this information for the current term, please request such restrictions to the Registrar's Office in writing, prior to the beginning of each semester. No access to "directory information," will be released, except in limited instances authorized by law.

Additional information concerning your Privacy Act Information rights may be obtained by contacting the Student Information Officer, Allen Felisberto, Registrar, Northern Essex Community College, 100 Elliott Street, Haverhill, MA 01830, telephone [617] 374-0721, extension 242, Office Room B-217 of the Science Building.

The provisions of this catalog are not to be regarded as an irrevocable contract between the student and the college. Northern Essex Community College reserves the right to change any provisions or requirements at any time within the student's term of enrollment at the college, and shall not be responsible for any interruptions whatsoever in the student's educational program due to unforeseen circumstances beyond the control of the college.

Students are responsible for meeting in full the requirements for graduation set forth in the college catalog. The student advisor assists in the planning of a program, but the final responsibility for meeting the requirements for graduation rests with the student.

### **Northern Essex Community College OCCUPATIONAL ADVISORY COUNCIL**

**John J. Linnehan, Chairman**  
Haverhill, Massachusetts

**Mario Alfano**  
Lowell, Massachusetts

**William T. Butler**  
Lawrence, Massachusetts

**John C. Cahalane**  
Boston, Massachusetts

**Joseph Gangi**  
Lawrence, Massachusetts

**Wilbur Gibble**  
North Andover, Massachusetts

**David M. Hakanson**  
Lowell, Massachusetts

**Pamela Kvilekval**  
Andover, Massachusetts

**Robert Radula**  
Lowell, Massachusetts

**Elaine Tucker**  
Newburyport, Massachusetts

**Peter Vanier**  
Lawrence, Massachusetts

**Robert E. Webber**  
Haverhill, Massachusetts



## Goals of the College

Northern Essex is a community college designed to meet community needs. The college's community includes more than forty-five cities and towns in the Merrimack Valley as well as localities in nearby southern New Hampshire.

Northern Essex is a comprehensive community college concentrating all of its resources on the first two years of your college career.

The college provides an excellent quality of education at a low cost. Northern Essex offers a wide range of degree programs: transfer oriented programs for students who plan to continue their education at senior institutions and career programs for students who want education leading to productive jobs and better futures. All of the college's programs reflect the needs of business, industry and culture in the Merrimack Valley area.

Northern Essex provides special programs for adults through its Division of Continuing Education and Community Services. Courses are available during the day, in the evening and on Saturday mornings. Courses are available during academic semesters and in the summer. And, extension campuses in Lowell, Chelmsford, Newburyport and Lawrence make studying at the college as convenient as possible.

Northern Essex is a commuter college located in the heart of its region and dedicated to the aims and interests of its community.

## Philosophy of the College

Northern Essex Community College is constructed around the belief that education should be and can be available to everyone in the community. Anyone, from sixteen to eighty-one (or younger or older) is welcome to utilize the educational opportunities available at the college.

Northern Essex seeks out potential students who may not be aware of the educational possibilities around them. Age, ethnic or religious background, past academic records are not prohibitive factors to admission to the college. Northern Essex encourages people to consider education throughout their lives.

To implement these ideals, the college has developed (and is continuing to expand) a wide variety of programs to meet a wide variety of community needs. Associate degree programs, certificate programs, developmental programs, job training programs and recreational programs are all available at Northern Essex - and there are many different approaches to participating in these programs. The college will continue to strive in the future to make education for all a fact of life in the Merrimack Valley.

## Governance of the College

Jurisdiction for the community colleges in the Commonwealth of Massachusetts has been designated to the Massachusetts Board of Regional Community Colleges by the State. The Board, in turn, delegates full authority and responsibility for the administration of individual community colleges to the president of the college.

At Northern Essex, to develop shared authority and responsibility in the decision-making process, an academic council has been created as a partnership including the student body, the faculty and the administration. Establishment of this council recognized the need for increasingly effective participation by all the components of the academic community in the governance of the college.

The functions of the Academic Council at Northern Essex are delegated to the council by the President of the College. The council is advisory in nature. The Academic Council represents a basic commitment by the college to a basic organization charged with basic tasks.



## History of the College

In October of 1960, during the governorship of Foster J. Furcolo, Harold Bentley, our founding President and now President Emeritus, was appointed to develop a permanent, comprehensive community college to serve the Merrimack Valley region.

The challenge was immense; but so was the opportunity for public educational service. In the Fall of 1961, housed in an old New England town hall, the former Greenleaf School in Bradford, donated to the new college by the City of Haverhill, one hundred and eighty-six students - students who were to be the first graduating class - came to study at Northern Essex Community College.

Northern Essex grew steadily. The City of Haverhill made more space available in its former high school and the college held classes in churches and other buildings in the area. The original small library has become a Learning Resource Center. The first tiny enrollment has grown over 4,000 % in the last fifteen years. A thriving Division of Continuing Education and Community Services now serves over 4,000 adults each semester.

In the Fall of 1971, the college's new campus, located on a magnificent stretch of rolling New England countryside donated by the City of Haverhill, opened its doors to all students in the region.

The main campus, located in Haverhill, serves a wide spectrum of students in the entire Merrimack Valley region. Auxiliary campuses, under the auspices of the Division of Continuing Education and Community Services, serve Lowell, Lawrence and Newburyport. The first few associate degree and one-year certificate programs have been developed to include forty-two specialties in the Liberal Arts, in Business, Engineering and Technology, the Health professions and Human Services. Developmental programs are available and the college provides occupational training in C.E.T.A. funded programs.

The City of Haverhill's generous gift has become a permanent addition to the public educational services offered to its citizens by the Commonwealth of Massachusetts.

# ADMISSIONS

Everyone has the right to apply for admission to Northern Essex Community College. The college is deeply committed to offering general educational opportunity to all, without discrimination on any basis. Applicants for an associate degree program must be high school graduates or the equivalent, although this requirement may be waived for adults who show other evidence of their ability to succeed in college work.

The college sets no general closing date for the receipt of applications; each application file is acted upon as soon as possible after it is completed. Therefore, it is to the applicant's advantage to submit a completed form as early as possible. There is an application deadline date of January 15 for students applying for entrance to the Nursing, Respiratory Therapy and Radiologic Technology programs.

Applicants will be notified, in writing, of the status of their applications.

Applicants should be sure to consult this catalog for specific prerequisites for admission to individual programs.

## Steps to Admission

1. OBTAIN AN APPLICATION FORM
2. COMPLETE THE APPLICATION FORM AS FULLY AS POSSIBLE
3. RETURN THE FORM TO THE OFFICE OF ADMISSIONS AT NORTHERN ESSEX AND INCLUDE:
  - Application Fee of \$10.00\*
4. REQUEST THE HIGH SCHOOL AND ANY COLLEGE ATTENDED TO FORWARD THE FOLLOWING RECORDS TO THE OFFICE OF ADMISSIONS:
  - Transcript of Grades
5. AWAIT NOTIFICATION BY THE OFFICE OF ADMISSIONS OF THE STATUS OF THE APPLICATION.

**NOTE:** Check or money order for the application fee is made payable to Northern Essex Community College. The application fee is non-refundable. One \$10.00 payment of the application fee covers the cost of applying to three (3) Commonwealth community colleges. The college receiving the \$10.00 fee is asked by the applicant to notify the other two colleges of the payment of the fee. The application fee may be waived in cases of financial hardship.

All inquiries, requests for forms, and other questions pertaining to admission to the college should be directed, in writing to:

The Office of Admissions  
Northern Essex Community College  
100 Elliott Street  
Haverhill, MA 01830

## Veterans Admissions

Veterans accepted into the college are eligible for monthly benefits from the Federal Government. Applications for these benefits may be obtained from the Veteran's Administration or the Financial Aid Office at the college. In order to insure the quickest possible receipt of your checks, you should return your completed application and a copy of your separation papers (DD214) to the Veteran's Office at the college. The college will send an enrollment certification to the Veteran's Administration, along with your application. Processing of applications normally takes about six weeks.

## Admission for High Schoolers

Students who have not yet graduated from high school may take courses at Northern Essex for credit (on a full-time or part-time basis) as participants in the A COLLEGE EXPERIENCE FOR HIGH SCHOOL SENIORS PROGRAM. For more information, contact the Office of Admissions.

## Foreign Admissions

Northern Essex Community College accepts a limited number of foreign students each year. Admission is offered to foreign students after all applications from American citizens have been processed.

The documents required from foreign students on admission to the college are:

**HIGH SCHOOL TRANSCRIPT:** All courses completed in high school should be listed. The transcript should be translated into English and certified as an accurate translation of the original document.

**COLLEGE TRANSCRIPT:** if any

**TEST OF ENGLISH AS A FOREIGN LANGUAGE [TOEFL]:** Those applicants whose test results are unsatisfactory may be accepted by the college for a program called Intensive English as a Second Language. Successful completion of this English program may lead to admission to a degree program for which the applicant expresses a preference.

**CERTIFICATION OF SUPPORT:** in the amount of approximately \$5,000 per year.

**APPLICATION FEE OF \$10.00:** must accompany the application form. This fee is non-refundable.

All of the documents listed above should be received by the Office of Admissions at least one month prior to the beginning of classes. In general, this date would be the first week of August for the Fall semester, or the last week of December for the Spring semester.

## **Unclassified Admissions**

Students may take courses at Northern Essex as unclassified students (students who are not matriculated in a degree program) and as part-time students (students carrying less than twelve credit hours per semester).

## **Unclassified Students**

An unclassified student is one who is taking individual courses at Northern Essex without reference to the requirements of a degree program. Such students will normally be enrolled in the Division of Continuing Education and Community Services. However, when certain courses in the Day Division are undersubscribed, the Director of Admissions may declare them available to unclassified students who are not on academic suspension. Any student, suspended or not, may take any course in the Division of Continuing Education and Community Services as an unclassified student. Unclassified students are not eligible for financial aid and veterans benefits.

## **Transfer Admissions**

Applicants who have completed courses at accredited institutions may transfer such courses to Northern Essex. Credit earned at other institutions will be evaluated on an individual basis. All credit earned at institutions other than Northern Essex will be evaluated by the Director of Admissions.

## **Advanced Placement Admission**

Students who take Advanced Placement courses and an Advanced Placement Test of the College Entrance Examination Board in secondary school may be awarded advanced placement and credit at the college. Credit is granted on the basis of a three or better grade on the Advanced Placement Test.

## **C.L.E.P. Credit**

Northern Essex Community College offers credit for life experience measured by the College Level Examination Program (CLEP). Students may apply to the Office of Admissions for granting of CLEP credit. A minimum of twenty-four semester hours of work, and the final year of work, must be done at Northern Essex in order for a student to qualify for a degree.

## **Credit for Life Experience**

The Credit for Life Experience Policy provides the opportunity to award college credit to a student who demonstrates that his or her knowledge and skills are the equivalent to those gained in a course or courses offered by the college. Students interested in credit for life experience should contact the Dean of Students. The process for obtaining credit for life experience is individualized and may include a challenge examination\*, one or more personal interviews,

preparation of a portfolio, and/or other detailed evidence that you know those things, or possess the skills, offered in a course for which Northern Essex Community College grants credit.

When the general requirements (and those requirements of the particular department involved in the process) are completed, a decision concerning the awarding of credit for your life experience will be forwarded to you and to the Registrar's Office by the Committee on Credit for Life Experience. The Registrar will enter the credit awarded on your permanent record, indicating that the credit has been awarded and that it has been earned by the Credit for Life Experience process.

Credits earned through this process may be applied toward graduation. However, it is the policy of this college that 24 credits toward graduation must be earned at Northern Essex. Credit for Life Experience may not be substituted for these 24 credits. Any student in a one-year certificate program must earn at least 12 credits in classroom activity at Northern Essex Community College.

## **Pre-Program Study**

Pre-program study at Northern Essex Community College is designed to help students prepare for possible future entry into a degree program for which they are not immediately qualified, or which is filled at the time they apply. Acceptance for pre-program study is not to be taken as a commitment for future acceptance into a degree program at the college.

Pre-program study allows students to take courses which satisfy the prerequisites for entry into the program of their choice. They may also begin taking courses which satisfy some of the actual course requirements of their chosen program - if eventual acceptance into that program is granted, the courses which have been completed successfully will be credited toward a degree. Courses in communications, the natural sciences, social science, mathematics, liberal arts and elective courses are available for pre-program study.

## **Adult Part-Time Studies**

For the convenience of adults who may wish to take courses on a part-time basis, and minimize commuting time, the college offers a variety of courses each semester which meet once each week. Please contact the Office of Admission for further information.

## **Post-Graduate Credit**

Credit may be granted for courses which have previously been counted toward a degree which an individual has been granted (whether baccalaureate or associate degree) provided the conditions above have been met. Transfer credit will be discussed with the appropriate department heads whenever a professional accreditation (such as in Nursing) is involved, or whenever a specific course description may require the expert evaluation of the department specialist.

# TRANSFER PROCESS

## FROM N.E.C.C. to another college

As a general rule, all course work completed at Northern Essex is transferable to senior institutions throughout the country at full academic value since the college is accredited.

Full transfer credit toward the baccalaureate degree is granted by most senior institutions for all courses in the following Northern Essex curricula: Liberal Arts, Engineering Science, Business Transfer. There are some courses at the college intended for two-year, associate degree curricula which are designed for students who are preparing for direct entry into business or industry. These courses are college-level, but are not intended to meet the objectives of a baccalaureate program and, therefore, may not be transferable.

It is the responsibility of each student to select courses at Northern Essex that will be acceptable for his chosen field of study at the senior institution of his choice. Careful study of the catalog of that institution will answer most questions. Students should request, from the registrar of the senior institution they select, a copy of that college's catalog. Counselors at Northern Essex are readily available to help students work out transfer requirements.

## WITHIN N.E.C.C.

Students who wish to transfer from one program to another at Northern Essex are encouraged to do so provided they are qualified for the new program and provided the program has room for them. Application should be made to the Dean of Students. A counseling interview with the division chairperson associated with the new program is recommended.

The Dean of Students, working with the appropriate division and department chairpersons, will determine what courses from the old program can be transferred and will so advise the student and the Registrar. When a course is applicable to the new program, the course and the grade received will be transferred. The Registrar will compute a new quality point average (QPA) based only on courses applicable to the new curriculum. However, all courses taken and grades received will appear on the academic record, even though they are not computed in the QPA for the new curriculum.

## TO N.E.C.C. from another college

Transfer credit may be granted for courses taken with a grade of C or better at other accredited institutions when the course is applicable to the Northern Essex curriculum in which the student is enrolled. Credit earned at other than accredited institutions will be evaluated on an individual basis. The Director of Admissions will evaluate all credit from other institutions.

Grades given for courses transferred from another college are not computed in the quality point average at Northern Essex.

A student must complete his final year of work and a minimum of twenty-four credit hours of work at Northern Essex in order to qualify for a degree from the college.

## Commonwealth Transfer Compact

On Monday, May 13, 1974, the presidents of the five sectors of public higher education in Massachusetts signed the following policy which became effective in the Fall of 1974. This policy concerns all students who are transferring from a two-year Massachusetts State community college to a four-year Massachusetts State college or university.

An Associate Degree will be transferred as a unit (provided you meet the requirements for admission) and applied towards a Baccalaureate Degree as the equivalent of sixty (60) credit hours of undergraduate college-level study if the following courses are included:

1. 6 credits of English/Communications
2. 9 credits of Behavioral/Social Sciences \*
3. 9 credits of Humanities/Fine Arts \*
4. 9 credits of Mathematics and/or Sciences
5. the remaining credits at the college level

Normally, if a grade of D was earned in a course, these credits are not transferrable; however, under this policy, D credit will be accepted toward the Baccalaureate Degree. The receiving institution is required to apply D credit toward a major only if it does so for students who originally enrolled in that institution as freshmen.

Furthermore, all Associate Degree holders accepted for transfer under this Compact will be subject to no special requirements beyond those specified as major department and/or graduation requirements for students who originally enrolled in that institution as freshmen.

Therefore, if you plan to transfer to a Massachusetts State college or university, it is recommended that you complete your program and receive an Associate Degree and that you include in your program of courses the core courses listed above as requirements for the Compact transfer.

If you have any questions or are treated unfairly when you transfer under the Commonwealth Transfer Compact, contact the Counseling Office at Northern Essex.

Humanities courses include foreign languages, communication, philosophy, art, music, literature and religion.

\* Social Science Courses include anthropology, psychology, sociology, history and government.

# TUITION & FEES

The Massachusetts Board of Regional Community Colleges establishes mandatory and discretionary fee schedules for all community colleges in the Commonwealth. At the present time, Northern Essex limits charges to the following fees:

## DAY DIVISION

Application Fee .....	\$10.00
Activity Fee (per semester).....	\$17.50
Insurance Fee (basic plan).....	\$5.00/\$7.00
Degree Candidate's Fee.....	\$15.00
Tuition (Massachusetts residents)	
Per semester, full-time students.....	\$150.00
Per credit hour, part-time students.....	\$16.00
Tuition (Non-residents)*	
Per semester, full-time students.....	\$737.50
Per credit hour, part-time students .....	\$82.00
Institutional Materials Fee (per credit hour).....	\$1.00
Transcript Fee (per copy after initial free copy).....	\$1.00

Every student aged 65 or older may take courses offered at the college tuition-free on a seat-available basis provided the student's annual income is \$10,000 or less.

\*Non-residents may qualify for New England Regional Student Program assistance to reduce tuition costs. Inquiries should be made to the Office of Admissions.

## DIVISION of CONTINUING EDUCATION and COMMUNITY SERVICES

Registration Fee.....	\$3.00
Late Registration Fee.....	\$3.00
Degree Candidate's Fee .....	\$15.00
Tuition (per credit hour).....	\$25.00
Institutional Materials Fee (per credit hour).....	\$1.00
Transcript Fee (per copy after initial free copy) .....	\$1.00

## Full-Time Student

A full-time student is any student carrying twelve credit hours or more during one semester. A part-time student is any student carrying less than twelve credit hours in one semester.

## Books & Supplies

Textbooks and other supplies are available at the Northern Essex Bookstore.

Although the exact cost of books and supplies depends upon course selections, costs usually run approximately \$1.00 to \$15.00 per course. Students are required to obtain basic texts for each course and should plan to spend an average of \$45.00 to \$60.00 for books and supplies each semester. All purchases from the N.E.C.C. Bookstore are on a cash basis. Checks payable to the N.E.C.C. Bookstore are acceptable.



## FINANCIAL AID

Northern Essex Community College participates in the federal financial aid program which was established in 1958 with the passage of the National Defense Education Act. In accordance with the philosophy of this and subsequent acts, the college, through federal, state and its own institutional funds, seeks to assist students to attend college who would otherwise not be able to afford such an education.

Financial assistance is available at the college through a number of programs outlined below. Financial assistance is granted to students from any one, or any combination of these programs in a manner which is carefully worked out to be most suitable for the student and his or her needs. It is assumed that a student and his or her family also have a responsibility toward financing a college education. Therefore, a student's and/or parent's contribution is considered in making a financial aid award. It is a student's responsibility to use money awarded to cover direct college expenses.

Financial aid is not automatically renewable; you must re-apply each year by submitting a current Parent's Confidential Statement or a Financial Aid Form. Whichever form is used, it must be mailed, upon completion, and with a fee, to Princeton, New Jersey where it will be processed. This form will then be forwarded to Northern Essex for review by the Financial Aid Office. All must also complete a Northern Essex Community College institutional application and a Basic Educational Opportunity Grant (BEOG) application form to be considered for financial aid. Because it takes 4-6 weeks time to process these applications before they can be reviewed at Northern Essex, all students, whether they are new or renewal applicants, **must apply early**. Students and/or their parents may also be required to supply verification of their income data.

## B.E.O.G. Grants

Basic Educational Opportunity Grants are applied for directly from the federal government. Applications may be picked up either from the financial aid office at the college or from your high school guidance office.

Students should consider this program the floor of their financial aid package and will be required to apply for this program in order to receive any other financial assistance from Northern Essex.

Part-time students are eligible for BEOG grants. However, part-time students must be enrolled in a degree program and must carry at least 6 credit hours to be eligible for a BEOG grant. BEOG grants for part-time students are prorated based on the number of credit hours carried.

## Work/Study

This is a program of part-time employment under the sponsorship of the Federal Government. It is designed to help full-time students meet their educational expenses. Students may work up to 15 hours weekly while attending classes, or up to 40 hours weekly during vacations or summer. **Only students with special permission from the Financial Aid Office may work during vacations.** Eligible students may work for the college or private non-profit organizations. Priority is given to placing students in positions at the college. The Dean of Administration and the Financial Aid Office have the responsibility of placing qualified students in their job assignments.

College work-study will begin in September and continue through May. Students may or may not be allowed to work during the January semester break and spring vacation. This will depend upon a student's need and the availability of funds. You should realize that your award represents a maximum that you may earn; it does not obligate the full amount in all cases.

## S.E.O.G. Grants

Under the Supplementary Educational Opportunity Grant Program, an award which does not have to be repaid, students of exceptional financial need are awarded up to one-half of their financial need, provided an equal sum is found as a "match". Recognized scholarships, National Direct Student Loans, participation in the College Work-Study Program and BEOG grants are all considered legitimate matches. Eligible students may receive awards ranging from \$200.00 to \$1,500.00, up to one-half of their need. However, the maximum amount over a four-year period is \$4,000.00. Students must be enrolled on at least a half-time basis to qualify for this award.

## N.D.S.L. Loans

Individuals who do not qualify for Supplementary Educational Opportunity Grants or BEOG grants may qualify for National Direct Student Loans. These loans do not accrue interest while the student remains in school, the armed forces, VISTA or the Peace Corps. Repayment, which may extend over a ten-year period, begins only after a grace period of nine months. Any payments received by the college before the grace period ends are interest free and are

deducted from the principal. Otherwise, National Direct Student Loans are paid back quarterly, with an interest rate of 3% a year on the unpaid balance. Undergraduates may borrow up to \$2,500 in their first two years and the maximum a student may borrow to complete his undergraduate work is \$5,000.

If borrowers become employed in certain fields, they may subsequently have part or all of their loan cancelled. Certain requirements must be met. If a student teaches in an elementary or secondary school designated as having a high enrollment of low income students, or if a student is a full-time teacher of handicapped children (including mentally retarded, deaf, speech impaired, visually handicapped, seriously emotionally disturbed) in an elementary or secondary school, the loan and interest will be cancelled at a rate of 15% a year for the first and second years, 20% for the third and fourth year and 30% for the fifth year of service.

If a student is employed as a full-time staff member in a Head Start Program, the loan and interest shall be cancelled at the rate of 15% a year for each complete year of service.

If a student serves in the armed forces in an area of hostility for a year, the loan and interest will be cancelled at the rate of 12½% for each year of service up to 50%.

## Nursing Student Loans

The Nursing Student Loan Program is designed for full-time undergraduate students who have been accepted for a course of study leading to an Associate or Bachelor of Science degree in Nursing. Providing financial need is evident, a student may borrow as much as \$1,500.00 per year up to a maximum amount of \$6,000.00 for his or her entire under-graduate education. Repayment and interest on these loans do not begin until nine months after the student ceases to pursue a full-time course of study.

The repayment of the principal may be extended over a ten-year period with interest at the rate of 3% per annum. Partial cancellations of the loan will occur for each year the student works full-time as a professional nurse in any public or private non-profit institution. For the first, second and third year, the loan will be cancelled at the rate of 15%; for the fourth and fifth year at the rate of 20%.

## H.E.L.P. Loans

Students who are not eligible for financial aid through the federal programs which have been listed, or who apply after the federal money has already been allocated, may wish to apply for a bank loan through the Higher Education Loan Program. These loans and the applications for them are available at local banks. You should first try the bank where you or your family do business. If they do not give HELP loans, there is a list of banks in this area available in the

Financial Aid Office at Northern Essex.

The interest rate on HELP loans is 7%. In many cases, the federal government pays the interest while the student is in college.

If you are applying for a loan of less than \$2,000.00 and your family's adjusted income is \$15,000.00 or less, you may be eligible for an interest subsidy without the recommendation of the college. If this is the case, the college merely fills out an Education Certificate signifying to the bank that the student is attending the college. If you are applying for a loan of more than \$2,000.00 and/or if your family's adjusted gross income is more than \$15,000.00, you must file a Parent's Confidential Statement because in this case the college must recommend to the bank a reasonable loan based on the need of the applicant.

## **Nursing Scholarships**

The federally-funded Nursing Scholarship Program is available to full-time students accepted for a course of study leading to an Associate or Bachelor of Science degree in Nursing. Applicants must evidence financial need and academic promise. The maximum grant allowable is \$1,500.00 for one academic year.

## **Board of Higher Education Scholarships**

The Massachusetts Board of Higher Education gives scholarships based on need to students who are residents of Massachusetts. For the school year 1976-1977, the awards will be for tuition up to \$300.00 in the public sector, \$900.00 in the private sector and \$600.00 to an out-of-state institution.

Entering freshmen receive first priority in this scholarship program; however, students who are already in college may apply. This scholarship is based upon need and may be renewable each year. You should indicate on your Parent's Confidential Statement or your Financial Aid Form that you want an additional copy of the form to be sent to the State of Massachusetts. These awards are not determined by the college and the **deadlines are very strict**. However, we do attempt to help students receive these awards.

## **Faculty Association Scholarships**

The Faculty Association/MTA at Northern Essex has provided a number of half-year tuition scholarships. The scholarships are available to students who have completed at least one semester at Northern Essex. Students, to be eligible for Faculty Association Scholarships, must have the recommendation of a member of the Association and a minimum quality point average of 3.00. Preference is given to students with higher quality point averages.

# **STUDENT SERVICES**

## **Counseling**

Everyone has a problem of one sort or another, at one time or another. Just living means problems. Certainly, planning an education can mean problems and students often need help to solve them. They need access to new alternatives, suggestions, advice, encouragement or perhaps simply a warm and friendly ear.

Northern Essex has a staff of professional counselors who understand the problems of the commuting student, the academic demands made on him or her, and the world of work or further study he will enter when he leaves the college. Counselors work with Northern Essex students for all kinds of reasons:

**CAREER INFORMATION** - Counselors maintain a great deal of information about careers and how to prepare for them....check with them if you are trying to decide about a career that interests you. Check with them, also, if you have no firm idea about the career that might be right for you.

Counselors are prepared to administer interest tests and to interpret the test results for and with you.

**TRANSFER** - Counselors help you plan for the time when you will be continuing your education at a four-year college or university. There is much information that you will need at that time and counselors have the catalogs, application forms, etc. you need.

**DEGREE REQUIREMENTS** - Counselors keep abreast of the requirements of all programs of study offered at Northern Essex and are available to help you with questions about these requirements.

**WITHDRAWING FROM THE COLLEGE** - You must see a counselor if you find it necessary to withdraw from the college.

**PERSONAL PROBLEMS** - Counselors are trained to help with personal problems of all kinds. If they can't help you, they will find someone who can.

Counselors at Northern Essex are, above all, accessible to the student. The counseling office is open regularly every day for any student who needs some friendly advice.



## Faculty Advising

The student advisory system provides each member of the student body with a member of the faculty to whom they can turn for information and assistance and upon whom they can depend to be available and accessible. The advisor also helps the student to utilize the resources of the college and the community for career advising and personal counseling."

## Handicapped Services

The Handicapped Services Office (HSO) was established to serve the special needs of those people on campus with chronic diseases or emotional, mental or physical disabilities. By law, the college is required to make all programs and activities accessible to all otherwise-qualified handicapped people. The HSO serves to aid all handicapped students obtain the maximum benefits from a college education.

Northern Essex Community College is a leader in this area, and has worked for the past several years to make the campus accessible for all people. All buildings are equipped with the necessary ramps, elevators and wheelchair-accessible restrooms. In addition, there are lowered drinking fountains and public telephones.

The HSO can provide such services as AMESLAN interpreters for the hearing-impaired, readers and braille and cassette books for the visually impaired, supportive counseling for the emotionally disabled, personal assistance for the wheelchair-bound, etc. The HSO maintains close working relationships with the various rehabilitation agencies, often serving as an advocate for students. In addition, the HSO works with individual teachers to help them meet the particular needs of each handicapped student. When necessary, preferential registration and other arrangements can be made through the HSO.

## Health Services

Before matriculation, students must complete a form describing their general health and any medical abnormalities of which the college should be aware.

The Student Health Service is staffed by a registered nurse under the direction of the college physician. The Health Service is open daily, 8:30 A.M. to 3:30 P.M. in Room D-120-A in the Gymnasium. The college has regularly scheduled clinic hours during the academic year. College physicians are Dr. David Byrne and Dr. Roger Guttner. Dr. Byrne's clinic hours are 10 A.M. to 12 noon on Tuesdays. Dr. Guttner's clinic hours are 9 to 11 A.M. on Fridays.

The Health Service will provide treatment, medication, referral and follow-up as needed free of charge. Counseling will be done by the nurse or physician with referral to outside facilities when necessary. Consultants in various specialities from the surrounding area are also available for treatment and advice. Laboratory tests and x-rays are referred to an outside hospital.

No charges are incurred by the student for health services. However, the student is responsible for all outside expenses. Emergencies will be treated at the Health Service or sent directly to nearby Hale Hospital in Haverhill. For serious illnesses or injuries, an ambulance service is available at all times.

## Student Insurance

All students in the Day Division are required to carry the basic Student Health Insurance plan. This plan covers events occurring while the student is on campus or is travelling to and from the college on days when classes are in session **only**. Every accident must be reported to the college nurse. Claim forms for medical and x-rays, expenses, etc. are available at the Health Service which must be submitted by the student in order to realize insurance benefits.

Students are encouraged to elect the Supplemental 24-Hour All Accident and Sickness Insurance Medical Plan at a nominal additional premium. This extended plan (which may be designed to include other family members also) provides coverage for students at other than those hours during which the college is in session, during semester breaks, and during the summer. This extended plan is especially important for students who will become 19 years of age during the college year and may not be eligible for coverage under their parents' insurance plan.

The major services offered to students completing their academic program include:

#### **JOB LISTING & REFERRAL SERVICE**

The Basic Data Sheet of registrants can be reviewed upon receipt of a job notice, with copies of all applicable job notices sent to those registered individuals whose background and training meet the general qualifications of the available position. Part-time and summer jobs are posted in Room C-111 in the College Center as they are recruited.

#### **RECRUITING PROGRAM**

Each year the Office of Placement and Career Services will invite employers to visit the campus to interview students and alumni/ae for available employment opportunities. For the most part, employers participating in the on-campus recruiting program do so for the purpose of interviewing students for permanent full-time employment.

#### **JOB SEARCH ASSISTANCE**

Workshops will be scheduled throughout the academic year to assist students in preparing for the task of finding professional employment. Topics discussed are resume writing, interview techniques and preparation, and job search techniques.

#### **CAREER RESOURCE LIBRARY**

The Career Resource Library is available for student use. Descriptive material presently includes information on specific careers, training and the employment outlook; books relating academic majors to possible career choices; references on career planning, the job search and decision-making processes; catalogs of colleges for potential transfer students; books and materials describing sample resumes, cover letters and hints for interviewing; recruiting brochures and annual reports of companies, organizations and agencies and many other selected career and employment materials.

#### **CREDENTIALS SERVICE**

Your Basic Data Sheet, recommendations, college transcripts and resume become your credentials file. When you are applying for jobs, employers will often want copies of the information contained in your credentials file. Either you or the employer may request that your file be copied and sent to assist in evaluating your application for employment.

All students are encouraged to visit and use the services of the Office of Placement and Career Services. The office is located in the College Center, Room D-111.

## **The College Center**

The College Center is the base for all extra-curricular student life at Northern Essex. The Student Activities Office and the Student Government Association Office are located in the Center. There is a large game room, equipped with ping pong tables and billiards. The Center also houses the Drop-In Center and two large, comfortable lounges.

The Center is the hub of student services. The Office of the Dean of Students, Counseling Office, Financial Aid and Veterans Affairs Office, Career Planning and Placement Office and Health Services are located in the Center.

The College Center also houses the N.E.C.C. Bookstore and the college cafeteria. The cafeteria is open throughout the day and evening when classes are in session.

## **Drop-In Center**

The Drop-In Center (D.I.C.) is a professionally trained and supervised, volunteer-staffed peer assistance program staffed by students for students.

The D.I.C. provides information and referrals for all areas of personal concern, including substance abuse (alcohol and drugs), sexuality, birth control, problem pregnancy counseling, legal assistance, child care, rides/riders, roommates and many others. The D.I.C. is a place where anyone can come to talk about anything and be assured of a sensitive, caring response. The staff have been carefully trained to "help people help themselves", rather than to try to solve their problems for them or tell them what to do.

Community outreach and education - in classrooms, workshops, publications - is another important service of the Drop-In Center. The D.I.C. is supervised by a licensed psychologist and is located in the College Center.

## **Placement/Career Services**

The Office of Placement and Career Services assists students in career planning and in obtaining information about professional career employment. The goal of the Placement and Career Services Office is to provide students with sufficient career and employment information to understand the implications of their educational and vocational decisions. The Office will assist graduating students in obtaining information concerning current job opportunities commensurate with their academic preparation, interests, capabilities and career goals. All services are available to all students (not just matriculating students) free of charge and early use is encouraged.

## Cooperative Education

Cooperative Education is the integration of classroom theory with practical experience and, as the name implies, it represents a cooperative relationship between the college, the student and the community.

Under the umbrella of cooperative education, students in a wide variety of programs at the college are assigned employment positions in the community which reflect the training they are receiving in their academic program. Students must meet certain prescribed academic and performance standards as cooperative education employees and, although they may be paid as other employees in a particular firm or business, they remain under the career guidance of their academic department and the Office of Cooperative Education.

Many well-educated individuals have found it difficult to secure their first job because they lacked the practical experience most employers balance with educational qualifications in selecting an employee. Cooperative education experiences give the student the practical training he lacks. Co-op experience also gives an employer a better chance to evaluate a student as an applicant for future permanent employment. And, co-op education helps students determine their career direction. It gives them the opportunity to test a selected field before making a long-term commitment to that area.

Students without an off-campus position will be assisted by the Office of Cooperative Education in finding a co-op position. Students working full-time or part-time may apply to the Office of Cooperative Education to use this experience as part of their academic program. College credit for co-op experience is based upon the following criteria:

Relationship of the work experience to the academic program in which the student is enrolled

Quality of the work experience

Extensiveness of the required Learning Contract made between the college and the student

Satisfactory completion of the training assignment

Students should check with their academic department and the Office of Cooperative Education before registering for courses in cooperative education.



# ACADEMIC STANDARDS

Academic standards have been established at Northern Essex to help each student attain understanding, competence and excellence in the program of studies he or she has selected.

The following standards apply to all students who have matriculated (enrolled) in a program of studies in the college's Day Division as full-time students (students carrying twelve or more credit hours of work during one semester).

These standards also apply to all students in the college's Division of Continuing Education and Community Services with the following exceptions:

1. The semester course load regulation does not apply
2. The withdrawing from the college regulation does not apply
3. The regulation pertaining to suspension is the only academic standing regulation which applies and it is used differently.
4. The regulation on post-graduate courses does not apply
5. Drop/Add time periods differ.

Procedures relating to academic standards in the Day Division are handled by the Dean of Students, the Counseling Office, faculty advisors and the Registrar. Procedures in the Division of Continuing Education and Community Services are handled by the Continuing Education Office and the Registrar.

## The Curriculum Plan

The plan for each associate degree program of studies names certain courses which are specifically required in the program. The plan usually specifies other areas of study from which a specified number of courses must be selected by the student - these are designated as business electives, liberal arts electives, social science electives, etc. In certain programs, an opportunity is provided for the student to select a specified number of courses without restriction - these courses are free electives. Each curriculum plan states the total number of credit hours which must be earned to attain a degree.

Each curriculum plan is scheduled so that the student will graduate in four semesters. Graduating in four semesters requires a minimum of fifteen credit hours in a semester - and more than this in several degree programs. This time-table imposes a work load which frequently is too heavy for some students. The college therefore defines a full-time student as one who is carrying twelve credit hours in one semester.

The student establishes his own standard of performance and work load by the courses he selects each semester at registration. If he is not able to obtain all courses listed in the curriculum for that semester, he should take a course

listed for a later semester and take the original course later on. He should always check this choice with an advisor to ascertain proper sequence of courses. Senior students are given priority in registration.

## Program Prerequisites

When a course (or courses) is listed as a requirement for a degree in a given curriculum and a student wishes to obtain the degree without taking such a course (or courses), he or she may make request for waiver to the Dean of Students. The Dean of Students shall consult with the appropriate division and department chairpersons in formulating a decision. The Dean of Students may also refer such requests to the Board of Recourse and Review of the Student Academic Affairs Committee for an advisory opinion.

## Course Prerequisite

When a course is listed as a prerequisite for another course and a student wishes to register but has not fulfilled the prerequisite, a request for waiver of the prerequisite may be made on a form provided by the Registrar to the instructor of the course and the chairperson of the academic department which offers the course.

## Course Loads

The student is responsible for ascertaining the courses required in his/her curriculum. In order to graduate in four semesters, students must carry the number of credit hours each semester specified in their curriculum plans. Counselors and faculty are available for registration counseling.

**TAKING FEWER COURSES THAN CURRICULUM SPECIFIES:** a student is encouraged to take the number of courses he feels he can manage with good performance. Note, however, that courses omitted or their equivalent should be taken in summer session in order to graduate in two years.

**TAKING MORE COURSES THAN CURRICULUM SPECIFIES:** students with no previous college experience should limit themselves to the number of courses in the curriculum schedule. Students may not take more than five courses in one semester without permission. Students who have attained a QPA of 3.00 at Northern Essex or at another college may request the Registrar for approval to take an extra course. Approval will depend on the availability of seats.

## Drop/Add

A course for which a student did not register may be added to his schedule during the FIRST SIX ACADEMIC DAYS OF

## The Grading System

All marking is done according to a letter system in which A represents excellent work; B, good; C, fair; D, merely passing; I, incomplete; F, failure; W, withdrew; WP, withdrew passing; WF, withdrew failing. Grades are issued at the end of each semester by mail.

For computation purposes, grades are given numerical values called quality points:

A	=	4 quality points per credit hour
B	=	3 quality points per credit hour
C	=	2 quality points per credit hour
D	=	1 credit point per credit hour
F	=	0 credit points per credit hour
I	=	0 credit points per credit hour
WF	=	0 credit points per credit hour

A student's quality point average (QPA) is determined by dividing the number of credit hours attempted into the number of quality points earned as follows:

English Composition I	A	4	x	3	=	12
Introductory French I	C	2	x	3	=	6
L.A. Mathematics I	D	1	x	3	=	3
Zoology	A	4	x	4	=	16
Introductory Psychology	B	3	x	3	=	9
					16	46

A total of 16 credit hours divided into a total of 46 quality points earned equals a 2.87 QPA for the semester.

The quality point average is cumulative. The cumulative QPA is computed by dividing the total number of credit hours attempted in all semesters at the college into the total number of quality points earned in all semesters at the college.

Attempted credit hours include credit hours completed in a semester with a letter grade of A, B, C, D, F, WF or I. W or WP grades are not included in attempted credit hours. When a course is repeated, the higher of the two grades will be computed in the QPA; only the credit hours for the higher grade will be included in cumulative attempted hours, although the transcript will record both times the course was taken. Courses taken in the Division of Continuing Education and Community Services will be included in attempted credit hours.

## Incomplete Grades

A temporary grade of incomplete (INC) may be assigned when all work in a course is not accomplished or when a final examination is missed. INC grades are temporarily computed as F grades in the QPA. INC grades are converted to final grades fourteen calendar days after the last day of classes in a semester.

The initiative for seeking to change an INC to a passing grade must come from the student. An instructor may

### THE SEMESTER ONLY. Procedure follows:

The Registrar must sign a DROP/ADD FORM indicating that there is room in the class and that the student's course load is within the limits prescribed by the college

The Registrar will advise the instructor that the student has been added to the class.

Any student may drop a course by filing a DROP/ADD FORM with the Registrar. Failure to officially drop a course will result in an F grade for that course. The following DROP/ADD periods are in effect at Northern Essex:

PERIOD 1: Courses officially dropped during the first fifteen academic days of a semester are not recorded on the transcript

PERIOD 2: Courses dropped during the sixteenth to the forty-fifth days of a semester receive a grade of W, recorded on the transcript but not computed in the QPA

PERIOD 3: Courses dropped after the forty-fifth day of a semester receive a grade of WF, recorded on the transcript and computed as F in the QPA.

## Withdrawing from College

Any student who wishes to withdraw from the college must complete a WITHDRAWAL FORM which can be obtained in the Counseling Office. If a student leaves the college without completing a withdrawal form, the transcript will record an F grade for each course. The following withdrawal from the college periods are in effect at Northern Essex:

PERIOD 1: If a student officially withdraws from the college during the first fifteen academic days of a semester, no courses or grades are recorded on the transcript

PERIOD 2: If a student officially withdraws from the college between the sixteenth and the forty-fifth academic days of a semester, grades of W in all courses will be recorded on the transcript, but not computed in the QPA

PERIOD 3: If a student withdraws from the college after the forty-fifth academic day in a semester, grades of WP (if the student is passing the course) or WF (if the student is failing the course) will be recorded on the transcript and computed in the QPA.

In unusual cases, an exception might be made to this rule in regard to withdrawal from a course or from the college if necessitated by protracted illness or serious family problems. Decision in these cases will rest entirely with the administration of the college.

accept late course work only when satisfactory reasons for delay are given and course work already completed is of passing quality. If a final exam is missed, the instructor may allow a make-up exam only when satisfactory reasons for missing the exam are given and previous course work shows that satisfactory performance in the final exam would result in a passing grade for the course.

INC work not made up will result in a conversion of the temporary F grade to a permanent F grade at the end of the fourteen-day grace period.

## D and F Grades

A D or F graded course may be repeated and the higher grade computed in the QPA. There is no limit to the number of courses which may be repeated. Repetition of one specific course after two attempts, however, must be approved by the Student Academic Affairs Committee.

D and F grades may be replaced by:

1. Repeating the identical course in the Division of Continuing Education and Community Services or, if the course is not available in that division, repeating the course in the Day Division as a special student on a seat-available basis.
2. Repeating the identical course in the Day Division as part of a regular course of studies. (Students are reminded that they may not take more than five courses in one semester without prior approval.)

**NOTE:** In order to complete a program of work in four semesters, it will be necessary to take repeat courses during evening or summer sessions in the Division of Continuing Education and Community Services.

## Changing Grades

To alter the final grade of a student, instructors should submit the following information to the Registrar's Office.

Name of student

Title of course and section number

Grade originally reported

New grade

Brief, but comprehensive statement of reason for making change; e.g., clerical error, error in computing the grade.

Instructors requesting changes of grades will be notified of the action of the Dean of the College.

## Mid-semester Grades

No mid-semester grades are issued at Northern Essex. All students, however, have the right to require written evaluations from their instructors at any time during the semester.



## ACADEMIC STANDING

A student's academic standing indicates the progress he is making toward a degree and measures his eligibility to return the following semester. A minimum average is required at Northern Essex to continue from one semester to another. The three categories of academic standing are good standing, probation and suspension.

### Good Standing

Good standing status is assigned to students maintaining a QPA of 1.50 after attempting one to nineteen credit hours; a QPA of 1.75 after attempting twenty to thirty-six credit hours; a QPA of 1.90 after attempting thirty-seven to fifty-four credit hours; and a QPA of 2.00 after attempting fifty-five or more credit hours.

### Probation

Probation is a warning that a student may not be eligible to return to the college in the following semester unless his/her grades improve.

Probation status is assigned to students who earn a QPA below 1.50 after attempting one to nineteen credit hours; a QPA below 1.75 after attempting twenty to thirty-six credit hours; a QPA below 1.90 after attempting thirty-seven to fifty-four credit hours; and a QPA below 2.00 after attempting fifty-five or more credit hours.

Students on probation should consult with a counselor or faculty advisor to work out plans to improve grades. The college reserves the right to advise both student and parent of academic probation and the advisability of abandoning, or severely curtailing, extra-curricular activities or employment.

## **Suspension**

Suspension automatically drops a student from the college rolls and denies the student's eligibility to return in the following semester.

Suspension status is assigned to students who earn a QPA less than 1.00 after attempting one to nineteen credit hours; a QPA less than 1.50 after attempting twenty to thirty-six credit hours; a QPA less than 1.75 after completing thirty-seven to fifty-four credit hours; a QPA below 1.90 after attempting fifty-five or more credit hours, but less than nine credit hours beyond the total required in the student's curriculum; and a QPA below 2.00 after attempting nine credit hours beyond the total required in the student's curriculum.

## **Raising QPA'S**

Students suspended may raise their QPA's by successfully completing courses through the Division of Continuing Education and Community Services. Suspended students may apply for readmission after one semester or a summer session provided work done in the Division of Continuing Education and Community Services demonstrates ability to work successfully at the college level, and space is available in the college.

Students under suspension from the Division of Continuing Education and Community Services are suspended from degree status, but may continue to take courses in the Division and apply for re-admission to degree status by raising their QPA's. Students so suspended may not receive veteran's benefits or financial aid until they have returned to degree status.

## **Attendance**

Students are expected to attend each meeting of each class in which they are enrolled. The class instructor has full and final authority to decide whether a student is permitted to make up work missed through absence, and on what terms.

In the event a professor recommends that a student be dropped from a course for non-attendance, the student must receive written warning from the professor prior to the last absence.

Students have the option of withdrawing from a course without penalty through the forty-fifth day of a semester. When a student has missed four or more classes during the first forty-five days, the instructor may recommend in writing that the student be dropped with a grade of W from the course provided the student is warned in writing seven days prior to the time the withdrawal grade is recorded.

## **Study at the College**

The educational design for each curriculum at Northern Essex is based on the premise that the student will fulfill the requirements for the degree from courses at this college, once he has been accepted into a degree program. However, when a student lacks one or two courses for a degree at Northern Essex and problems of distance, course

availability or class time make it very difficult to take the courses at this college, he may request in a written letter to the Dean of Students approval to take the course elsewhere. The request letter should contain the Northern Essex degree program in which the student is enrolled, the name of the college the student plans to attend, the number and title of the course and a complete course description. This alternative will be approved only in hardship situations and is subject to the following stipulations:

1. All conditions prescribed above have been met
2. Approval is received by the student before taking the course.

## **Post-Graduate Grades**

A course taken after graduation from Northern Essex will not be included in the QPA for that graduation. A course taken before graduation and repeated after graduation will not replace the earlier grade. A new academic record will be compiled for post-graduate work.

## **Graduation Requirements**

Northern Essex Community College awards Associate Degrees in Art and Science to all qualified students at commencement exercises for each class. In order to receive this award, students must meet the following criteria for graduation:

- Completion of all required courses in a curriculum with a passing letter grade
- Completion of the number of credit hours prescribed by a particular curriculum
- Attainment of a cumulative quality point average of 2.00 or higher
- Completion of the petition for graduation (students must petition for graduation before the end of the semester prior to the semester in which they plan to graduate)
- Payment of all financial obligations

## **Honors**

Each semester a student is appointed to the Dean's List for Academic Honors if he fulfills the following requirements:

- He is a candidate for a degree
- He is carrying twelve or more credit hours within the semester
- He attains a quality point average of 3.00 or higher within the semester

High honors are awarded during commencement to all students with a cumulative quality point average of 3.50 or higher.

Honors are awarded during commencement to all students with a cumulative quality point average from 3.00 to 3.49 inclusive.

# REGULATIONS

## CONDUCT

Policy adopted by the  
Massachusetts Board of Regional Community Colleges

April 11, 1969

### Student Bill of Rights

#### STUDENT RESPONSIBILITIES

TO be knowledgeable of and comply with the directives, regulations and laws as established by the Massachusetts Board of Regional Community Colleges, the College and the Student Government.

TO respect the rights of individuals and groups to independent action as long as those rights do not interfere with the parallel rights of others, minorities and majorities alike, including the avoidance of action interfering with those educational processes under the auspices of the College.

TO be knowledgeable of and comply with the directives, regulations and laws of duly constituted civil authorities.

#### STUDENT RIGHTS

TO have the opportunity to pursue higher education.

TO have the freedom to exercise the rights of citizenship, association, inquiry and expression.

TO have the right to privacy and confidentiality.

TO have the right of voting representation on all recommendations to the President of the College on matters of concern, including but not limited to, academic standards, student affairs and curriculum changes.

TO have the right of quality education, including but not limited to:

The right to competent instruction in courses and programs offered by the College

The right to assistance in overcoming educational, cultural, emotional and economic disadvantages which hinder the educational process

The right to receive, in writing, from each faculty member during the first week of classes, every quarter or semester, a brief course description outline of the material to be covered, course requirements (including a specific list of information and techniques which the student is expected to acquire), attendance policy and the grading system to be utilized.

TO have the right to fair and equal treatment, including but not limited to instruction, evaluation and services by faculty, staff, students and administrators

TO have the right to procedural due process in grievance and disciplinary hearings.

Academic institutions exist for the transmission of knowledge, the pursuit of truth, the development of students and the general well-being of society. Free inquiry and free expression are indispensable to the attainment of these goals. As members of the academic community, faculty members, staff and students are encouraged in a sustained and independent search for knowledge.

Freedom to teach and freedom to learn are inseparable facets of academic freedom. The freedom to learn depends upon appropriate opportunities and conditions in the classroom, on the campus and in the larger community. The responsibility to secure and to respect general conditions conducive to the freedom to learn is shared by all members of the academic community - students, faculty and staff members.

Each college will respect and will defend the right of its members to lawful exercises of free speech and assembly in behalf of causes, whether popular or unpopular. These rights are properly exercised only when due regard for the rights of others is assured, and actions denying the right of others to move or speak freely, whether or not such interference is their motive, lie outside Constitutional guarantees and the obligation of the College to defend them. Therefore, if, in the judgment of the President or his designee, persons attempt to interfere with the freedom of movement or speech of members or guests of the college community, or the orderly operation of the College, the President of the college or his designee is authorized to:

- a. Advise such persons of the impropriety of their activity and request immediate desistance from such activity
- b. If such persons fail to desist, call the appropriate authority to remove those so interfering
- c. Suspend temporarily members of the College community who have participated in such interference and persist in such activity
- d. Grant as soon as reasonably possible a hearing before an appropriate committee to any person appealing such suspension. Following such a hearing, the committee will make a recommendation to the President
- e. Taking into account the committee's recommendation, the President will determine his disposition of the case.

Any person involved in the willful destruction of College or personal property will, in addition, be answerable to charges filed with the civil authority.

## Conduct at Northern Essex

Because Northern Essex is a commuting college, administrative supervision is necessarily at a minimum. However, rules of good conduct must be enforced. In signing the application form, each student agrees to abide by college action when the necessity arises. It is assumed that college men and women will demonstrate honor, self-respect and consideration for the rights of others. When the student deviates from this type of conduct, the college must take steps to correct the situation.

There are three levels of corrective action which the college follows in dealing with inadequacies in matters of unsatisfactory conduct. They are probation, suspension and expulsion.

**PROBATION** is defined as a condition under which a student's right to participate in organized college activities of extra-curricular nature may be suspended.

**SUSPENSION** from the college is the withdrawal of the right to attend classes. A suspended student may, after a designated period of time, request re-admission to classes.

**EXPULSION** from the college is also the withdrawal of the right to attend classes, but there is no provision for a request for re-admission. No student who has been expelled shall receive an honorable dismissal.

## Publications

No student or group of students in connection with any publication, public performance or social activity shall use any name or designation that implies a relationship with the college without the sanction of the President of the College, or the officers he designates.

## Financial Obligations

No student remains in good standing unless he or she meets his or her financial obligation to the college promptly. No student is permitted to register, to continue registration, or to receive a degree unless these obligations have been met.

## Alcohol/Drugs

Northern Essex Community College conforms with all state and federal regulations concerning the use of alcoholic beverages on campus.

The college complies with all state and federal laws governing the possession, use and sale of drugs, narcotics and other illegal substances.

## Change of Address

If at any time a student changes his legal or mailing address he should notify the college immediately so that his records can be brought up to date.

## Dormitories

No housing facilities are provided by or supervised by the college. Students who wish to move into the immediate college area may rent housing. Students are expected to respect the rights of the people from whom they rent housing and conduct themselves courteously.

# STUDENT ACTIVITIES

## Student Activities Office

The Student Activities Office provides a comprehensive program of extra-curricular events for the full-time, Day Division student. Concern for the extra-curricular needs of the community college student is an on-going priority in the Student Activities Office.

## Student Governance

College student governance is an exercise in democracy. Active participation in this phase of campus life helps the student develop toward one of the ultimate goals of education - the emergence of an individual who can function effectively in the world in which he or she lives.

The Student Government Association is the official governing body for students at Northern Essex. Through its elected representatives and their appointees, students are involved in many different areas of college governance. Each student becomes a member of the Student Government Association when he pays the Student Activity Fee.

The following structure shows the various ways in which student affairs are governed at the college.

## Student Council

Members of the Student Government Association elect a slate of students who speak for the entire student body as members of the Student Council.

The Student Council participates in the formation of student organizations and takes an active role in the assessment of student needs in planning for extra- and co-curricular activities.

vities. The Council is the representative voice of the students. The Council acts and reacts to student demands and brings leadership and student representation to all levels of college life.

## Academic Council

The Academic Council is a working coalition of students, faculty and administration which acts as an advisory board in the governance of the college. Through membership on the Academic Council, students become involved in the demanding work of decision-making for the college as a whole. There are twelve student body representatives on the Academic Council.

## Class Officers

Students at Northern Essex may complete requirements for a degree in the spring or fall semester, depending upon the date they entered the college and other factors. There are, therefore, no freshman and senior classes, per se.

In terms of governance, students are divided into freshman and senior classes according to the year in which most members of the class plan to graduate.

Freshman and senior class members elect officers who concern themselves with the affairs and activities special to a group of students planning to graduate at the same time. These officers also contribute ideas and experience to the entire college community.

## Student Advisory Commissioner

The Student Government Association elects one representative to the Student Advisory Commission to the Massachusetts Board of Regional Community Colleges. This commission discusses the mutual concerns of community college students throughout the state and makes recommendations to the Board.

## Student Advisory Board Representative

The Student Government Association elects one representative to the Northern Essex Community College Advisory Board. This Board meets regularly to discuss the concerns of the college as a whole.

## Student Activities Fee

The Student Activity Fee is allocated each year and funds over thirty college clubs. The Student Government, in conjunction with the President of the College, appropriates Activity Fee monies to the clubs and meets weekly to handle any student-related problems.

## Student Clubs

All students need an opportunity to become involved outside the classroom. They need a chance to meet new people, experience new events and break away from the routine of scholastic life. Below is a list of recognized clubs and organizations currently available at Northern Essex



Community College. To reach these clubs or to obtain a description of each club's scope and activities, contact the Director of Student Activities.

If you wish to organize a club that is not listed here, you may contact the Director of Student Activities to obtain the necessary forms and assistance. Each one of these clubs and organizations could be an extension of your academic growth. They are an excellent way to pursue an interest, meet new friends or just have fun.

**INTERNATIONAL CLUB**  
**MUSIC CLUB**  
**OUTING CLUB**  
**PHOTOGRAPHY CLUB**  
**SKI CLUB**  
**SPORTS COUNCIL**  
**SQUARE DANCING CLUB**  
**DANCE CLUB**  
**DRAMA CLUB**  
**DROP-IN CENTER**  
**FENCING CLUB**  
  
**STUDENT NURSES CLUB**  
**TENNIS CLUB**  
**TRACK CLUB**  
**WEIGHTLIFTING CLUB**  
**WOMEN'S CENTER**  
**FILM & VIDEO CLUB**  
**PROGRAM BOARD**  
**BIBLE CLUB**  
**BODY BUILDING CLUB**  
**CHEERLEADERS CLUB**  
**KARATE CLUB**

**WRAZ** [campus radio station]  
**PARNASSUS** [literary magazine]  
**CONTEMPORARY AFFAIRS SOCIETY**  
**THE OBSERVER** [campus newspaper]  
**THE HAPPENING** [campus newsletter]  
**STUDENT GOVERNMENT ASSOCIATION**

# Division of CONTINUING EDUCATION and COMMUNITY SERVICES

The Division of Continuing Education and Community Services provides educational opportunities to everyone interested in college study on a part-time basis. The division serves a variety of age groups in the community, with a central focus on the learning and interest needs of adults. The primary goal of the division is to help people expand their horizons, improve existing skills or learn new ones, grow in scope of interest, in understanding and in personal satisfaction.

Continuing education provides an answer to the growing need in our modern world for life-long education for everyone - what people need, when they need it. There are no requirements for admission - the division is open to all. People can matriculate (enroll) in a degree program (see section on Steps to Matriculation) take a course because it appeals to them, or develop a technical skill for a better job. They can take a developmental course to help them evaluate their educational potential, choose a special interest course, take a telecourse in their own homes or participate in workshops and seminars.

The Division of Continuing Education and Community Services provides low cost, relevant education for all. The program is planned to respond quickly and accurately to the needs of the community. The division provides an alternative entry into Northern Essex for people seeking a part-time educational program.

## Standards

The difference between college study in the Division of Continuing Education and Community Services and college study in the Day Division at Northern Essex is the approach students take toward their educational goals. Day Division students make college a full-time job. In the Division of Continuing Education and Community Services, most students are fitting education into already busy schedules at home or on the job.

Standards and requirements in the division are, for the most

part, identical to those in the Day Division:

Course content is identical

Scholastic standards are equivalent\*

Specific curriculum requirements are identical

Course hours are equivalent

Credit hours earned are identical

Counseling services are equivalent

The only exception to the above is the slate of non-credit, special interest courses offered by the division which are not graded.

\*See section on Academic Standards

## Division Services

### Credit Courses

Credit courses in the Division of Continuing Education and Community Services are offered in a wide variety of subject areas:

Courses may be taken with or without credit by people who wish to add to their general knowledge

Technical courses are available for people who want to learn new skills or increase existing skills

Refresher courses are provided in career areas

Transfer courses and college make-up courses are offered

Pre-college developmental courses are available

High school drop-outs, college students who need a specific transfer course, housewives, working people - all kinds of adults study individual courses in the division. Taking a credit course is a way for people to explore the idea of getting a college degree and assess their ability to do college work. Many students in the division decide to matriculate in a degree program after completing several credit courses. Others prefer to study without formalizing a particular educational plan immediately. Credit course study in the division is flexible.

## Special Interest Courses

A diverse slate of non-credit, special interest courses is offered each semester in the division. The course list changes from semester to semester as community interests vary:

Special courses in helping children to learn, in understanding drug psychology and in making marriage work are provided

Courses are available in hypnosis, understanding tax problems and planning family finances

Courses in English as a Second Language are offered on a part-time basis to meet a community need

Art courses in drawing, oils, watercolor, crafts, cloth-making, weaving, sculpting and other techniques are offered for beginning and advanced students

Courses especially designed to meet the concerns and interests of women and of elders are available

Yoga, karate, physical conditioning and a variety of dance and other physical recreation courses are offered.

The division's community service program is geared to the community group as well as the individual. The division is an active resource for area anti-poverty programs, neighborhood groups, the C.E.T.A. program, schools and businesses. The division offers community groups the opportunity to coordinate and develop - as well as participate in - workshops and conferences in conjunction with the college.

## Community Services

The community service phase of the Division of Continuing Education and Community Services is designed to effectively reflect the interests of the community. Workshops, seminars, off-campus affiliations, movie series, conferences, dance programs and other programs are examples of community services. As a community service, the division provides special courses and training sessions when requested to do so by responsible community organizations.

## G.E.D. Program

Working in conjunction with the college's Division of Instructional Development, the division offers a General Educational Development (GED) preparation course and testing program. Northern Essex is an official GED testing center and many hundreds of area citizens have qualified for high school equivalency diplomas at the college.

The broadly based GED preparation course reaches out to locate people who need a high school equivalency diploma, motivates them to prepare for a GED test, suits the preparation material to the needs of the individual and provides extensive personal and employment counseling.

## Telecourses

Northern Essex, through the Community College of the Air Consortium, offers courses via television - telecourses - in a number of academic disciplines each semester.

Telecourses add a new dimension in convenience to the educational opportunities available at the college. Telecourse students attend class in their own homes and at their own convenience, since most telecourse segments are broadcasted more than once.

Telecourse students supplement at-home viewing with assigned readings, workbooks, telephone conferences with the instructor and regularly scheduled, voluntary seminar discussions. An orientation session is held prior to the beginning of each telecourse.

## Associate Degree Programs

Associate degree programs are available in the Division of Continuing Education and Community Services in several areas:

### ASSOCIATE IN ARTS

Liberal Arts

### ASSOCIATE IN SCIENCE

Accounting

Administrative Assistant

Administrative Assistant: Education Option

Banking

Business Management

Business Transfer

Criminal Justice: Law Enforcement Option

Criminal Justice: Security Option

Deafness Communication

Educational Assistant

Educational Ass't: Language Communication Option

Executive Secretarial

Fire Protection and Safety Technology

Gerontology

Gerontology: Nursing Home Administration Option

Nursing

### CERTIFICATE PROGRAMS

Deafness Communication

Gerontology

Language Communication Aide

Security

In addition to the associate degree programs offered, students may do substantial course work in other degree programs offered by the college.

It is possible for a student to earn the associate degree in the Division of Continuing Education and Community Services in three years, by successfully completing required course work in six regular semesters and two summer sessions. There is, however, no limit to the amount of time a student may spend fulfilling the requirements for a degree.



## Counseling

Counseling is available at the registration center throughout the registration period. New students and students not certain of their educational direction are particularly urged to make use of the counseling service for help in selecting the courses best suited to their individual needs and goals.

The Counseling Office offers programs throughout the year to serve the needs of continuing education students. Counseling (personal and academic) is available daily during each semester from 9:00 A.M. to 9:30 P.M. Monday through Thursday, from 9:00 A.M. to 5:00 P.M. Friday and from 9:00 A.M. to 12 Noon Saturday. Anyone interested in continuing his or her education is free to use the counseling services at the college. **It is not necessary to be a student at Northern Essex to talk to the college's counselors.**

## Faculty

The faculty of the Division of Continuing Education and Community Services is drawn largely from members of the Northern Essex faculty, supplemented by selected professors from other colleges. From time to time, recognized community leaders with specialized skills join the staff.

## Facilities

All of the facilities of the college - the library, classrooms, the gymnasium, the laboratories, the faculty, the counselors - are available to students in the Division of Continuing Education and Community Services.

In addition, the college offers course work, counseling and registration services at extension campuses in Chelmsford at Chelmsford High School, in Lawrence at Lawrence High School, in Newburyport at the Y.M.C.A. Civic Center, and in Lowell at the University of Lowell.

## Brochure

A comprehensive brochure listing the courses and services of the Division of Continuing Education and Community Services is published three times annually, prior to the fall semester, spring semester and summer session. Registration forms, registration dates and times, class schedules and a calendar are included. These brochures are currently distributed to all homes in the Merrimack Valley and southern New Hampshire. In addition, other brochures and pamphlets are published to announce specific events.

## Division Procedures

### Admissions

There is no official application form for admission to the Division of Continuing Education and Community Services. Anyone may register for any course offered in the division. There are no general requirements for admission. A high school diploma is not necessary for registration. Students who wish to matriculate (enroll) in an associate degree program, however, must meet the admission requirements of the college; i.e., students must have a high school diploma or equivalency certificate and must meet prerequisites for specialized degree programs.

### Registration

There are several methods of registration in the Division of Continuing Education and Community Services:

**REGISTRATION BY MAIL:** Students are encouraged to register by mail as soon as they receive the semester brochure currently mailed to all homes in the Merrimack Valley and southern New Hampshire. A registration form is included in the brochure. Complete the form and return it to the college with a check or money order payable to Northern Essex Community College for tuition and all fees.

**ON-CAMPUS REGISTRATION:** An on-campus registration period is scheduled preceding the beginning of classes for each semester. Students may come to the college at that time, talk to counselors, complete the registration form and pay tuition and fees.

**GOLD CARD REGISTRATION:** A Gold Card registration session is scheduled immediately following the regular registration period for

each semester. At that time, elders over aged sixty-two who hold Gold Cards from Northern Essex may register for credit and special courses on a seat-available basis without tuition charge. (Nursing courses are exempted from Gold Card registration.)

**AUXILIARY CAMPUS REGISTRATION:** Students may register at auxiliary campus locations at registration periods prior to the beginning of classes for courses held at a particular auxiliary campus only. Students may also register for classes to be held at auxiliary campuses at the main campus.

program he selects. The last twenty-four credit hours of course work and the last two semesters in a degree program must be completed at Northern Essex. Student requests to take courses elsewhere for credit while enrolled in a degree program at Northern Essex must be made to the Dean of Students.

Some students who have completed twelve credit hours may not meet the requirements for admission to a degree program. These students may continue to attend courses in the division as special students provided they are profiting from college work. Credit received for courses taken while a non-degree student may be applied toward a degree, where appropriate, should the student later become a degree candidate.

## Tuition & Fees

Tuition (per credit hour) .....	\$25.00
Institutional Materials Fee (per credit hour).....	\$1.00
Registration Fee.....	\$3.00

A Late Fee will be required for late registration.

Additional fees may be required by those courses where extraordinary materials or supplies are needed.

Every student, age 65 years or over, may take credit and/or special interest courses tuition-free on a seat-available basis.

## Auditing

Courses for audit are available. Students who audit courses register as usual and pay the regular tuition and fees, but they take no examinations, receive no grades and earn no credit hours.

## Drop/Add

Students who wish to withdraw from, add or substitute a course must file a DROP/ADD FORM with the Registrar. Forms are available in the Continuing Education Office and in the Registrar's Office. It is not sufficient to tell your instructor that you are dropping a course. Any student who does not officially withdraw from a course will receive a failing grade for that course.

## Classes

Most classes in the Division of Continuing Education and Community Services are held evenings, Monday through Thursday. Other classes are scheduled on Saturday mornings. The fall and spring schedule of classes corresponds roughly to the college's academic calendar. Recognized holidays are observed.

## Matriculation

Many Division of Continuing Education and Community Services students decide to matriculate (officially enroll) in a degree program after completing several individual courses. Students should not delay matriculation after completion of twelve credit hours of work. The student is responsible for satisfying the degree requirements of the



## Steps to Matriculation

Students who apply for admission to degree status (matriculation) should take the following steps:

Obtain and complete the application form for matriculation to degree status available in the Continuing Education Office and in the Registrar's Office

Submit a high school diploma or equivalency certificate

Submit transcripts of schools and colleges previously attended.

## Transfer Credit

Transfer credits for the Division of Continuing Education and Community Services are handled by the Office of Admissions.



## SUMMER SESSION

The Division of Continuing Education and Community Services provides summer sessions as another educational opportunity. College students may take courses to shorten the length of their total programs. Students from other colleges may take courses. Summer session is an opportunity to adjust a poor course grade or take specific courses needed for transfer. Students may take courses to qualify for later admission to the college and high school students may take courses to get an early start on their college careers.

### Summer Admissions

Admission to summer session is accomplished by filling out the registration form provided by the college at registration time. It is not necessary to apply officially for a degree program (matriculate) in order to take classes. Registration dates for summer are announced prior to the beginning of classes in a summer session brochure currently distributed to all homes in the Merrimack Valley and southern New Hampshire. Registration is completed when the registration form is returned to the college and all fees are paid. Many students find it convenient to register early by mail. Fees must accompany the mailed registration forms.

### Summer Standards

Standards for class and laboratory work in the summer sessions are the same as those during the academic year. The pace of course work, however, is accelerated in the summer sessions and each course is the equivalent to a semester of work. Most of the basic courses available during the academic year are offered in the summer.

### Summer Drop/Add

Students who wish to withdraw from, add or substitute a course must fill out a DROP/ADD FORM available in the Continuing Education Office and in the Registrar's Office. Any student who does not officially withdraw from a course will receive a failing grade for that course.

### Summer Counseling

Counseling is available during registration and from 9:00 AM to 9:30 PM, Monday through Thursday and 9:00 AM to 4:30 PM, Friday throughout summer session.



# COURSES and PROGRAMS



## Transfer Programs

The transfer programs at Northern Essex give students planning to continue their education at senior institutions a fully transferable, comprehensive education equivalent to the first two years of a four-year college or university.

The transfer programs also give students the opportunity to explore a wide range of disciplines and many students use the first two years of college to test their aptitudes, abilities and preferences in different subjects before specializing.

Students in these programs usually plan to continue their education beyond the associate degree level. The courses in these programs parallel in structure and aim the first two years of the curricula in most senior institutions and successful completion of these courses should provide a good basis for transfer with advanced standing to a senior institution.

Completion of these programs does not, however, guarantee successful transfer. The receiving institution makes the final decision on individual transfer applications to schools not covered in the Commonwealth Transfer Compact. It is the student's responsibility to make sure that he or she has completed the requirements of the senior institution he/she plans to attend.

Students who wish to grow in general education without transfer planning find many interesting areas of study and development in the Liberal Arts program.

## Career Programs

Career programs emphasize the immediate marketing of knowledge and skills developed in a program. Successful completion of a career program prepares the student for direct entry into jobs in public service, business and industry.

The basic structure of these programs concentrates on theoretical and technical courses in the skills necessary for a particular phase of employment. Students, however, also explore areas of cultural significance and develop intellectually as well as professionally through the election of Liberal Arts courses.

Although career program courses are not specifically designed for transfer to a senior institution, they do have definite transfer potential. Many students in career programs have been accepted in baccalaureate curricula related to their career fields after graduation from Northern Essex.

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# ***LIBERAL ARTS***

*an associate degree program offered through*

***THE DIVISION of COMMUNICATIONS***

***THE DIVISION of SOCIAL SCIENCES***

***THE DIVISION of MATHEMATICS, SCIENCE & TECHNOLOGY***



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## ***THE DISCIPLINES of LIBERAL ARTS***

*Chemistry  
Communications  
Earth Science  
Economics  
Fine Arts  
Government  
History  
Languages  
Mathematics  
Music  
Natural Science  
Philosophy  
Physical Education  
Physical Science  
Physics  
Religion  
Social Science  
Theatre*

# *The Associate Degree in Liberal Arts*

Liberal Arts studies at Northern Essex has a long and strong tradition. The curriculum is composed of **CORE REQUIREMENTS** and **ELECTIVE COURSES**. Core courses help students develop basic competencies and a fundamental body of information. Elective courses provide students with opportunities for exploring varied areas of knowledge and for pursuing specific areas of interest in greater depth.

The study of Liberal Arts at Northern Essex is based on the following fundamental ideas:

The liberally educated person understands himself, relates successfully to his environment and is able to communicate clearly and effectively.

Liberal Arts study enhances students' appreciation of the present, provides a study of the accumulated wisdom of the past and fosters a more complete awareness of the future and its possibilities.

The Liberal Arts Program grants an associate in arts degree to students whose academic goals are a two-year course of studies and to students who wish to transfer to a four-year college or university. Transfer students from Northern Essex Community College have been extremely successful in their advanced education.

In addition to the associate degree, Liberal Arts provides a strong foundation for career opportunities in a variety of areas such as the social sciences, management, government, publishing, writing, commercial art, theatre, education, business and other disciplines.

For those who have not yet decided on the educational objectives best suited to their interests and potential, this program provides exposure to unfamiliar areas so that these students can make career choices, set educational goals and assess the opportunities available to them.

## **LIBERAL ARTS PROGRAM**

Liberal Arts students complete minimum requirements in the seven specific areas listed below. The Associate Degree in Liberal Arts requires forty-four [44] credit hours of work in **CORE REQUIREMENTS** plus sixteen [16] credit hours of work in **ELECTIVE** courses - a total of sixty [60] credits for graduation.

### **CORE REQUIREMENTS**

<b>Basic Communications</b> .....	<b>6 credits</b>
<b>Behavioral Sciences *</b> .....	<b>6 credits</b>
<b>Foreign Languages/Philosophy</b>	
<b>Religion/Fine Arts</b> .....	<b>6 credits</b>
<b>History/Government/Political Science</b> .....	<b>6 credits</b>
<b>Literature **</b> .....	<b>6 credits</b>
<b>Mathematics ***</b> .....	<b>6 credits</b>
<b>Natural Science</b> .....	<b>8 credits</b>

\* All courses offered in anthropology, archaeology, psychology and sociology.

\*\* Any course offered by the Department of Communications except the following: EN0101/EN0102 Journalism I & II; EN0121 Creative Writing; EN0401 Reading Strategies; EN0403 Teaching Reading; EN1276/EN1277/EN1278 English as a Second Language; EN3011 Reading Improvement; EN4311 Communications I; EN4401/EN4402 English Composition I & II; EN4676 Technical Writing; EN8011 Speech; EN8012 Oral Interpretation.

\*\*\* Any math course except the following: MA0500 Developmental Pre-School Math; MA0501 Fundamentals of Math; MA5511 Survey of Basic Math; MA5613 Math of Finance; MA5641 Math of Business; MA5671 Business Statistics.

### **FREE ELECTIVES ..... 16 credits [or more]**

Free electives include any course offered by the departments of Communications, Foreign Languages, History and Government, Behavioral Sciences, Philosophy and Fine Arts, Mathematics and Natural Sciences; UP TO 3 CREDITS in the Department of Sport and Leisure Studies; UP TO 6 CREDITS in courses offered by any other department in the college. Additional electives in other areas must be approved in advance by the Dean of Students and the chairperson of the Division of Social Sciences or the Division of Humanitites and Communications.

# Planning your Liberal Arts program...

In order to help students focus their Liberal Arts studies more effectively and choose courses which meet their individual needs and interests, Northern Essex has developed a number of approaches to the scheduling of courses in the Liberal Arts Program. These approaches include the Liberal Arts Cluster Program, Thematic Studies, Course Concentrations and the Part-Time Studies Program. These approaches are suggestions; students can design their own programs of study with help from faculty advisors. Students should pay attention to specific courses they will need for transfer.

## CLUSTER PROGRAM

First semester Liberal Arts students may elect to participate in the Cluster Program. This program offers four or five essential Liberal Arts courses in a time schedule that groups classes compactly in four different time plans. Cluster students attend classes as an integrated group, fostering sharing of mutual academic concerns and a peer support system; may be assigned an academic advisor who is also one of their teachers; and are in close contact with faculty members interested in an educational approach which coordinates learning experiences through close cooperation and the interrelating of ideas and academic skills. For information on specific clusters for each semester, students should contact the chairpersons of the Division of Liberal Arts or the Office of Counseling.

## CONCENTRATIONS

Students may select a special Course Concentration within the Liberal Arts Program. Each concentration recommends a two-year sequence of study which fulfills core requirements for graduation, provides a focus for pre-major study, is transferable to a four-year baccalaureate program, and provides some career possibilities. Course Concentrations currently offered include the following:

### Course Concentration in SOCIAL WORK

An introduction to the purpose, techniques and problems of social work. A guide for Liberal Arts students who wish to begin preparation for a position in public and private social work agencies and/or who intend to transfer into four-year programs in social work. Suggested schedule of sixty-two credit hours of work is:

#### FIRST SEMESTER

EN4401 English Composition I  
SO3321 Introduction to Sociology  
MA5520 Liberal Arts Math I  
Natural Science Elective  
Philosophy, Fine Arts or Foreign Language \*  
SO7830 Introduction to Social Services

#### SECOND SEMESTER

EN4402 English Composition II  
PS1101 Introduction to Psychology  
MA5506 Statistics  
Natural Science Elective  
Philosophy, Fine Arts or Foreign Language \*

\* Students are strongly urged to take Introductory Spanish I and II to fill this requirement.

#### THIRD SEMESTER

GV3313 Federal Government  
SO3333 Contemporary Social Problems  
PS1203 Human Growth & Development  
Literature Elective  
Free Elective

#### FOURTH SEMESTER

GV3314 State & Local Government  
PS1354 Human Relations  
SO7510 Minority Groups  
Literature Elective  
Free Elective

### Course Concentration in JOURNALISM, FILM & BROADCASTING

Career training for students who would like to specialize in communications for newspapers or magazines, radio and television, public relations or free lance writing.

#### FIRST SEMESTER

EN4401 English Composition I  
EN0101 Journalism I  
EN3333 Broadcast Reporting & Announcing  
GV3314 State & Local Government  
Fine Arts Elective

#### SECOND SEMESTER

EN4402 English Composition II  
EN0102 Journalism II  
EN2455 Art of the Movies  
PS1101 Introduction to Psychology  
HI9916 Recent U.S. History

#### THIRD SEMESTER

EN3334 Television Production  
FA7051 Introductory Photography  
Literature Elective  
Natural Science Elective  
Math Elective

#### FOURTH SEMESTER

EN2457 Film Production  
Free Elective  
Math Elective  
Introduction to Sociology or Cultural Anthropology  
Natural Science Elective

## Course Concentration in TOWN MANAGEMENT

An introduction to the function, politics and problems of managing local town governments. A guide for students who wish to begin preparation for a position in local government and/or who intend to transfer into four-year programs in Public Administration, Government or Political Science. Suggested course schedule of sixty-two credit hours of work:

### FIRST SEMESTER

EN4401 English Composition I

HI9913 U.S. History I

ES5502 Physical Geology

MA5520 Liberal Arts Math I

Philosophy, Fine Arts or Foreign Language \*

### SECOND SEMESTER

EN4402 English Composition II

HI9914 U.S. History II

EV5627 Environmental Biology

MA5506 Statistics

Philosophy, Fine Arts, Foreign Language \*

\*Students are strongly urged to take Conversational Spanish I and II to fill this requirement.

### THIRD SEMESTER

GV3313 Federal Government

EC3311 Principles of Economics I

AC6601 Introductory Accounting I

Literature Elective

Behavioral Science Elective \*

### FOURTH SEMESTER

GV3314 State & Local Government

EC3312 Principles of Economics II

CT6631 Introduction to Data Processing

Literature Elective

Behavioral Science Elective \*

\* Students are urged to select one of the following courses to fill this requirement: Criminology, Juvenile Delinquency, Contemporary Social Problems, Human Relations, Introduction to Psychology.

## Course Concentration in THEATRE

This concentration offers guidance in course selection to students interested in preparing for careers associated with the theatre. Each concentration is developed on an individual basis. Theatre courses available each semester include:

Introduction to the Theatre

Acting

Mime

Courses offered at least once during each two-year period include:

Fundamentals of Play Production: Directing  
Reader's Theatre  
History of the Theatre  
Special Topics in Playwriting  
Special Topics in Rehearsal & Performance

In addition to courses, a Drama Club-sponsored theatrical production is offered each semester. An extracurricular activity, Drama Club membership offers excellent opportunity to get practical experience in several aspects of theatre: business, technical and performance.

## THEMATIC STUDIES

These are groupings of courses in related content areas offered for returning students. Thematic Studies provide students with an opportunity to understand the relationship between various disciplines and assure a sound selection. Among the Thematic studies which students can utilize to select courses and satisfy a specific interest, are the following:

### Thematic Studies on ANCIENT WISDOM & MODERN MAN

The events of the past contributes to and shapes our present day world; this Thematic grouping helps to foster an appreciation and understanding of this relationship through the study of literature, philosophy and history. Courses in this schedule are:

SPECIAL TOPICS: MAN, MYTH & MODERN LITERATURE

RE1103 EASTERN PHILOSOPHIES & RELIGIONS

HI9903 EARLY CIVILIZATIONS

### Thematic Studies on NATURE, MAN & CULTURE

Culture predates man and is human. For most of man's existence, he has lived in balance with the environment. Advancing technology has been creating an increasingly complex relationship between human society and the natural world. Courses in this schedule are:

SC5011 MAN & HIS ENVIRONMENT

SO3324 CULTURAL ANTHROPOLOGY

GV3312 INTRODUCTION TO POLITICAL SCIENCE

### Thematic Studies on RESPONSES TO CULTURAL TRANSITION

By examining and evaluating the historical, literary and religious dimensions of mankind's experiences with the modernization process, this schedule hopes to provide students with a deeper awareness of the variety of responses and approaches to understanding, explaining, and adapting to a modern society. Courses in this schedule are:

EN8863 MODERN EUROPEAN LITERATURE

HI9953 MODERN CHINA & JAPAN

RE1102 CONTEMPORARY WESTERN RELIGION

## Thematic Studies on WOMEN

Study of women from a range of perspectives: women's lives as depicted in biography, autobiography and literature; women in love and in romance - historically and today; and women within the family structure as it has changed since the 16th Century. *Vive la difference!* Courses in this schedule are:

EN8883 WOMEN IN LITERATURE & LIFE

SPECIAL TOPICS: THE FAMILY IN HISTORY - A SURVEY

SPECIAL TOPICS: WOMEN'S LIVES - RECORDED/IMAGINED

Additional thematic groupings are being developed for the future.

## PART-TIME STUDIES

This program offers a variety of Liberal Arts courses which meet once each week. Courses are regular college courses and all credit earned may be applied toward a degree at the college or transferred to another college. Most courses meet in a morning or afternoon time block. Special tuition, registration and admissions procedures are available to students in the Part-Time Studies Program.



# ***DIVISION of BUSINESS***

*offering associate degree programs in*

**BUSINESS ADMINISTRATION:**

**ACCOUNTING**

**BANKING**

**BUSINESS MANAGEMENT**

**BUSINESS TRANSFER**

**FOOD SERVICES MANAGEMENT**

**OFFICE & BUSINESS EDUCATION:**

**EXECUTIVE SECRETARIAL**

**EXECUTIVE SECRETARIAL:**

*Accounting Option*

*Legal Option*

*Medical Option*

*Technical Option*

**OFFICE and BUSINESS EDUCATION:**

*Transfer Option*

**ADMINISTRATIVE ASSISTANT**

**ADMINISTRATIVE ASSISTANT:**

*Education Option*

**MEDICAL RECORD TECHNOLOGY**



## Associate Degree in Accounting

The Accounting Associate Degree Program provides two semesters of selected Liberal Arts courses to develop general understanding and knowledge. The basic core of business courses introduces the student to the broad variety of areas within the field and prepares him to select that particular phase of specialization which best suits his needs, abilities and interests. The accounting specialization is designed to prepare graduates to enter business, industry and government in the specialized accounting field. Sixty-four (64) credit hours of work are required for graduation.

FIRST SEMESTER		CREDITS	SECOND SEMESTER		CREDITS
EN4401	English Composition I	3	EN4402	English Composition II	3
AC6601	Introductory Accounting I	4	AC6602	Introductory Accounting II	4
	Mathematics (See Math Chart)	3		Mathematics (See Math Chart)	3
MK6678	Marketing	3	EN8011	Speech	3
SO3321	Introduction to Sociology or or		PS1101	Introduction to Psychology	
PS1101	Introduction to Psychology	3	SO3321	Introduction to Sociology	3
		16			16
THIRD SEMESTER		CREDITS	FOURTH SEMESTER		CREDITS
FI3652	Business Finance	3	EC3652	Survey of Economics	3
LW6651	Business Law I	3	MG6676	Personnel Management	3
AC6651	Intermediate Accounting I	4	AC6652	Intermediate Accounting II	4
AC6671	Cost Accounting	3	AC6682	Tax Accounting	3
SC5011	Man and His Environment *	3		Elective	
		16			16

\* Another science course may be elected in place of this requirement.

## MATH CHART

### RECOMMENDED MATH COURSE SEQUENCES FOR STUDENTS IN THE FOLLOWING PROGRAMS: ACCOUNTING, BUSINESS MANAGEMENT, BUSINESS TRANSFER

PREVIOUS EDUCATION	FIRST SEMESTER	SECOND SEMESTER	THIRD SEMESTER	FOURTH SEMESTER
No Algebra Background				
Option #1 Arithmetic Weak	Mathematics of Finance	Business Statistics or Basic Algebra	Basic Algebra	College Algebra
Option #2 Arithmetic Strong	Basic Algebra	College Algebra	Quantitative Methods	Statistics [L.A.]
Algebra I	College Algebra	Quantitative Methods	Statistics [L.A.] or Calculus I for Business	Calculus II for Business
Algebra I and II	Quantitative Methods	Statistics [L.A.]	Calculus I for Business	Calculus II for Business
Algebra I and II and Additional Mathematics Courses	Quantitative Methods or Calculus I for Business	Statistics [L.A.] or Calculus II for Business	Calculus I for Business	Calculus II for Business

Additional courses should be elected to meet transfer requirements or for personal development. Requirements for transfer are constantly changing. Your program is your responsibility. Contact the college to which you may wish to transfer for current information.

Any questions about your choice of courses? Contact a counselor or a faculty member in the Mathematics Department or Department of Business Administration.



## Associate Degree in Banking

The Banking Associate Degree Program\* has been developed by the college in conjunction with the Educational Committee of the Merrimack Valley Chapter, American Institute of Banking (AIB). This program is designed primarily for those presently employed in banking. The courses parallel those offered by the American Institute of Banking, and students are able to work towards AIB certification as they complete associate degree requirements. The program provides the student with a broad academic background and the fundamentals of banking and business management skills. Sixty-two (62) credit hours of work are required for graduation.

\* Currently offered in the Division of Continuing Education & Community Services only.

FIRST SEMESTER		CREDITS	SECOND SEMESTER		CREDITS
EN4401	English Composition I	3	EN4402	English Composition II	3
AC6601	Introductory Accounting I	4	PS1101	Introduction to Psychology	
MA5613	Mathematics of Finance	3	or	or	
EC3652	Survey of Economics	3	SO3321	Sociology	3
BK6601	Bank Operations		EN8011	Speech	3
or	or		BK6611	Money & Banking	3
BK6602	Savings & Time Deposit Banking	3	AC6602	Introductory Accounting II	4
		16			16
THIRD SEMESTER		CREDITS	FOURTH SEMESTER		CREDITS
LW6651	Business Law I	3	EC3652	Business Law II	3
	Elective (Liberal Arts)	3		Elective (Liberal Arts)	3
MG6676	Personnel Management	3		Elective	3
	Banking Elective *	3	BK6612	Bank Management	3
	Banking Elective *	3		Banking Elective **	3
		15			15

\* THIRD SEMESTER BANKING ELECTIVES: Installment Credit, Credit Administration, Home Mortgage Lending, Trust Department Services.

\*\* FOURTH SEMESTER BANKING ELECTIVES: Bank Letters and Reports, Analyzing Financial Statements, Fundamentals of Bank Data Processing, Bank Public Relations and Marketing, or any third semester banking elective not previously selected.

## Associate Degree in Business Management

The Business Management Associate Degree Program provides two semesters of selected Liberal Arts courses to develop general knowledge and understanding. The basic core of business courses introduces the student to the broad variety of areas within the field and prepares him to select the particular area of specialization best suited to his needs, abilities and interests. The Business Management specialization qualifies graduates to enter business and industry, in any of several areas. Careful choice of electives builds a background in a particular business area: marketing, insurance, real estate, or industrial management. Sixty-two (62) credit hours of work are required for graduation.

FIRST SEMESTER		CREDITS	SECOND SEMESTER		CREDITS
EN4401	English Composition I	3	EN4402	English Composition II	3
AC6601	Introductory Accounting I	4	AC6602	Introductory Accounting II	4
	Mathematics (See Math Chart)	3		Mathematics (See Math Chart)	3
MK6678	Marketing	3	EN8011	Speech	3
SO3321	Introduction to Sociology		PS1101	Introduction to Psychology	
or	or		or	or	
PS1101	Introduction to Psychology	3	SO3321	Introduction to Sociology	3
		<hr/>			<hr/>
		16			16
THIRD SEMESTER		CREDITS	FOURTH SEMESTER		CREDITS
FI3652	Business Finance	3	EC3652	Survey of Economics	3
LW6651	Business Law I	3	MG6676	Personnel Management	3
	Business Elective *	3		Business Elective *	3
	Business Elective *	3		Business Elective *	3
	Elective	3	SC5011	Man and His Environment **	3
		<hr/>			<hr/>
		15			15

\* THE BUSINESS ELECTIVES: Retailing, Advertising, Salesmanship, Tax Accounting, Cost Accounting, Business Law II, Industrial Management, Managerial Accounting, Time and Motion Study, Principles of Insurance Credits and Collections, Principles of Real Estate, Introduction to Data Processing.

\*\* Another science course may be selected in place of this requirement.

## Associate Degree in Business Transfer

The Business Transfer Associate Degree Program provides two semesters of Liberal Arts study, selected to develop general knowledge and understanding. A basic core of business courses introduces the student to the broad variety of areas within the field, and prepares him to select the particular area of specialization best suited to his needs, abilities, and interests. The Business Transfer specialization is designed for students planning to transfer to a four-year institution after completing the Associate Degree Program. To enroll in this program, students must demonstrate academic ability in core courses, be recommended by the Department of Business Chairman and be approved by the Dean of Students. Sixty-four (64) credit hours of work are required for graduation.

FIRST SEMESTER		CREDITS	SECOND SEMESTER		CREDITS
EN4401	English Composition I	3	EN4402	English Composition II	3
AC6601	Introductory Accounting I	4	AC6602	Introductory Accounting II	4
	Mathematics (See Math Chart)	3		Mathematics (See Math Chart)	3
MK6678	Marketing	3	EN8011	Speech	3
SO3321	Introduction to Sociology		PS1101	Introduction to Psychology	
or	or		or	or	
PS1101	Introduction to Psychology	3	SO3321	Introduction to Sociology	3
		<hr/>			<hr/>
		16			16

THIRD SEMESTER		CREDITS	FOURTH SEMESTER		CREDITS
EC3311	Principles of Economics I	3	EC3312	Principles of Economics II	3
	Natural Science	4		Natural Science	4
	Elective *	3		Elective *	3
	Elective *	3		Elective *	3
	Elective *	3		Elective *	3
		16			16

- \* Elective should be chosen to meet the transfer requirement of the particular four-year college the student plans to attend.
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## Associate Degree in Food Service Management

The Food Services Management Associate Degree Program provides a broad academic background and business management education as well as practical and related instruction and experience in all phases of food service operation and management. Graduates will be qualified for entry management positions in one of the largest industries in the country. Opportunities are available in restaurants, hospitals, schools, industry and private business for restaurant managers, merchandising managers, training directors, food services managers and others. The program is offered jointly by Northern Essex Community College and the Greater Lawrence Regional Technical Institute. All classroom courses are held on the college campus. Laboratory courses and the clinical experience are located at the regional institute. Sixty-seven (67) credit hours of work are required for graduation.

FIRST SEMESTER		CREDITS	SECOND SEMESTER		CREDITS
EN4401	English Composition I	3	EN4402	English Composition II	3
AC6601	Introductory Accounting I	4	AC6602	Introductory Accounting II	4
MA5613	Mathematics of Finance	3	MK6678	Marketing	3
FS6601	Introduction to Food Services Industry *	4	FS6602	Food Services Operation I *	4
	Liberal Arts Elective**	3		Liberal Arts Elective**	3
		17			17

### SUMMER SESSION

An eight-week summer work experience within the food service industry is required. As an alternative, other time periods within the college year may qualify. Acceptable completion of a report on work experience is an essential aspect in meeting this requirement. In no event shall work experience prior to student enrollment in the program satisfy this requirement.

THIRD SEMESTER		CREDITS	FOURTH SEMESTER		CREDITS
LW6651	Business Law I	3	EC3652	Survey of Economics	3
	Natural Science Elective	4	MG6676	Personnel Management	3
FS6625	Food Services Management I	3	FI3652	Business Finance	3
	Elective **	3		Elective **	3
FS6611	Food Services Operations II *	4	FS6612	Food Services Operations III *	4
		17			16

\* Students may receive credit for one or more courses in Food Services upon recommendation and certification of the Program Coordinator at the Greater Lawrence Regional Technical Institute.

\*\* RECOMMENDED ELECTIVES: Introduction to Data Processing, Speech, Introduction to Psychology, Sociology, American Civilization, Government, Cultural Anthropology, Literature.

PROGRAM PREREQUISITE: Interview with Program Coordinator

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# *Programs in Office and Business Education...*

The Department of Office and Business Education offers several two-year programs leading to the Associate in Science degree which educate the student to qualify for many widely varied opportunities in the general world of business and professional offices.

**DUAL DEGREES:** The programs are organized with the flexibility to permit the student to complete one or more options in accordance with the need. The Executive Secretarial Programs have several options which are based upon a common core curriculum for the first year of study. It is possible for a student to graduate from more than one option by taking a few additional courses. Thus, options in the legal, medical, executive, or accounting fields may be combined.

**TRANSFER:** A transfer program is also available for those who wish to transfer to a four-year college to study for a bachelor's degree in Business Education or in Office Administration.

The Business Education Program provides the student with the opportunity to acquire not only high-level business and secretarial skills, but the possibility of transferring to a four-year program at a senior institution. Students may study for a Bachelor of Business Education for preparation for a career as a teacher of business subjects or for a Bachelor of Office Administration for preparation for excellent supervisory or management positions in the business world.

The Executive Secretarial Program may also be modified into a one-year program for the student who is not working toward an associate degree. This is predominately a skills-oriented program at either introductory or advanced levels. However, upon satisfactory achievement, transfer into an associate degree program is possible.

## **Associate Degree in Executive Secretarial**

The purpose of the Executive Secretarial Associate Degree Program is to train students to assume high-level secretarial positions on the administrative and executive levels. The two-year curriculum offers a balanced program of academic and technical courses leading to specialization in the executive secretarial area. The college-educated secretary finds a wide variety of opportunities in every business and in every profession. Sixty to sixty-one (60/61) credit hours of work are required for graduation.

<b>FIRST SEMESTER</b>	<b>CREDITS</b>	<b>SECOND SEMESTER</b>	<b>CREDITS</b>
EN4401 English Composition I	3	EN4402 English Composition II	3
AC6691 Elements of Accounting I	3	AC6692 Elements of Accounting II	3
Shorthand *	3	Shorthand	3
Typewriting I, II or III **	3	Typewriting II, III or IV	3
Liberal Arts Elective	3	PS1101 Introduction to Psychology	3
	15		15
<b>THIRD SEMESTER</b>	<b>CREDITS</b>	<b>FOURTH SEMESTER</b>	<b>CREDITS</b>
SH6671 Introductory Shorthand, Dictation & Transcription or or		SH6672 Advanced Shorthand, Dictation & Transcription or or	
SH6672 Advanced Shorthand, Dictation & Transcription	3	SH6673 Expert Shorthand, Dictation & Transcription	3
SL6661 Secretarial Procedures I Typewriting III or Secretarial Science Elective	3	LW6651 Business Law I Speech or Literature Liberal Arts Elective Secretarial Science Elective	3
Liberal Arts Elective	3		3
Natural Science Elective	3/4		15
	15/16		

\* Choice among SH6621 Principles of Shorthand, SH6622 Intermediate Shorthand, SH6671 Introduction to Shorthand, Dictation and Transcription

\*\* Choose appropriate course after consultation with departmental advisor.

## Associate Degree in Executive Secretarial: Accounting Option

The Executive Secretarial Associate Degree Program with Accounting Option offers an intensive preparation in the field of applied accounting as well as in secretarial skills. Business offices such as insurance firms, banks, real estate offices and mercantile establishments employ secretaries with accounting background and skills. Promotional opportunities to executive and managerial positions are especially prevalent for graduates with a strong combination of secretarial and accounting skills. Sixty to sixty-two (60/62) credit hours of work are required for graduation:

FIRST SEMESTER		CREDITS	SECOND SEMESTER		CREDITS
EN4401	English Composition I	3	EN4402	English Composition II	3
AC6691	Elements of Accounting I	3	AC6692	Elements of Accounting II	3
	Shorthand *	3		Shorthand	3
	Typewriting I, II or III **	3		Typewriting II, III or IV	3
	Liberal Arts Elective	3	PS1101	Introduction to Psychology	3
		15			15
THIRD SEMESTER		CREDITS	FOURTH SEMESTER		CREDITS
SH6671	Introductory Shorthand, Dictation & Transcription		SH6672	Advanced Shorthand Dictation & Transcription	
or	or		or	or	
SH6672	Advanced Shorthand, Dictation & Transcription	3	SH6673	Expert Shorthand, Dictation & Transcription	
SL6661	Secretarial Procedures I	3	or	or	
TW6631	Typing III			Secretarial Science Elective	3
or	or			AC6694	
	Group A Elective ***	3		Simulation in Accounting	3
AC6693	Elements of Accounting III	3		Speech or Literature	3
	Natural Science Requirement	3/4		Liberal Arts Elective	3
				Group A Elective ***	3
		15/16			15

\* Choice among SH6621 Principles of Shorthand, SH6622, Intermediate Shorthand, SH6671 Introduction to Shorthand, Dictation and Transcription

\*\* Choose appropriate course after consultation with departmental advisor

\*\*\* GROUP A ELECTIVES: Business Law I, Secretarial Procedures II, Machine Transcription, Cost Accounting, Tax Accounting, Personnel Management, Principles of Insurance, Principles of Real Estate, and Secretarial Field Experience

## Associate Degree in Executive Secretarial: Legal Option

The Executive Secretarial Associate Degree Program with Legal Option provides the opportunity for students to achieve not only superior secretarial skills to assume high-level, executive secretarial positions, but gives preparation for responsible positions in the legal field. The background necessary for a legal secretary is provided by courses in business law as well as courses in legal terminology and law office duties. Sixty to sixty-one (60/61) credit hours of work are required for graduation.

FIRST SEMESTER		CREDITS	SECOND SEMESTER		CREDITS
EN4401	English Composition I	3	EN4402	English Composition II	3
AC6691	Elements of Accounting I	3	AC6692	Elements of Accounting II	3
	Shorthand *	3		Shorthand	3
	Typewriting I, II or III **	3		Typewriting II, III or IV	3
	Liberal Arts Elective	3	PS1101	Introduction to Psychology	3
		15			15

**THIRD SEMESTER****CREDITS****FOURTH SEMESTER****CREDITS**

SH6671	Introductory Shorthand, Dictation & Transcription	
or	or	
SH6672	Advanced Shorthand, Dictation & Transcription	3
LW6651	Business Law I	3
SH6679	Legal Dictation & Transcription I	3
SK6661	Secretarial Procedures I	3
	Typewriting III or Secretarial Science Elective	<u>3</u>

SH6691	Legal Dictation & Transcription II	3
LW6652	Business Law II	3
	Speech or Literature	3
	Natural Science Elective	<u>3/4</u>
	Liberal Arts Elective	3

15/16

15

\* Choice among SH6621 Principles of Shorthand, SH6622 Intermediate Shorthand, SH6671 Introduction to Shorthand, Dictation and Transcription

\*\* Choose appropriate course after consultation with departmental advisor

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### Associate Degree in Executive Secretarial: Medical Option

The Executive Secretarial Associate Degree Program with Medical Option provides an intensive program of academic and secretarial science courses combined with preparation for employment in medical offices and other business directly related to the practice of medicine. The course material emphasizes medical terminology, medical transcription and office procedures as well as secretarial skills in stenography. Sixty-one to sixty-two (61/62) credit hours of work are required for graduation.

**FIRST SEMESTER****CREDITS****CREDITS**

EN4401	English Composition I	3	EN4402	English Composition II	3
AC6691	Elements of Accounting I	3	AC6692	Elements of Accounting II	3
	Shorthand *	3		Shorthand	3
	Typewriting I, II or III **	3		Typewriting II, III or IV	3
	Liberal Arts Elective	<u>3</u>	PS1101	Introduction to Psychology	<u>3</u>

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**THIRD SEMESTER****CREDITS****FOURTH SEMESTER****CREDITS**

SH6671	Introductory Shorthand, Dictation & Transcription		SH6672	Advanced Shorthand, Dictation & Transcription	
or	or		or		
SH6672	Advanced Shorthand, Dictation & Transcription	3	SH6673	Expert Shorthand, Dictation & Transcription	3
SL6661	Secretarial Procedures I	3		or	
TW6631	Typewriting III			Secretarial Science Elective	
or	or				
	Secretarial Science Elective	3	SL6680	Medical Secretarial Procedures	3
MR6605	Medical Terminology I	2	SH6677	Medical Dictation & Transcription	3
	Natural Science Elective	<u>3/4</u>		Speech or Literature	3
				Liberal Arts Elective	3
			MR6606	Medical Terminology II	<u>2</u>

14/15

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\* Choice among SH6621 Principles of Shorthand, SH6622 Intermediate Shorthand, SH6671 Introduction to Shorthand, Dictation and Transcription

\*\* Choose appropriate course after consultation with departmental advisor

## Associate Degree in Executive Secretarial: Technical Option

The Executive Secretarial Associate Degree Program with Technical Option is designed for students who wish to prepare for high-level positions in the secretarial field. In addition, this option enables the student to acquire the knowledge and skills needed for employment in technical offices relating to the fields of science and engineering. Sixty to sixty-one (60/61) credit hours of work are required for graduation.

### **FIRST SEMESTER**

EN4401	English Composition I	3
AC6691	Elements of Accounting I	3
	Shorthand *	3
	Typewriting I, II or III **	3
	Liberal Arts Elective	3

### **SECOND SEMESTER**

EN4402	English Composition II	3
AC6692	Elements of Accounting II	3
	Shorthand	3
	Typewriting II, III or IV	3
PS1101	Introduction to Psychology	3

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### **THIRD SEMESTER**

SH6671	Introductory Shorthand, Dictation & Transcription	
	or	
	or	
SH6672	Advanced Shorthand, Dictation & Transcription	3
SH6641	Technical Stenography	3
SL6661	Secretarial Procedures I	3
	Typewriting III or Elective	3
	Natural Science Elective	3

### **CREDITS**

SH6643	Technical Dictation & Transcription	3
TW6641	Technical Typewriting	3
	Speech or Literature	3
	Liberal Arts Elective	3
	Secretarial Science Elective	3

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15/16

\* Choice among SH6621 Principles of Shorthand, SH6622 Intermediate Shorthand, SH6671 Introduction to Shorthand, Dictation and Transcription

\*\* Choose appropriate course after consultation with departmental advisor

## Associate Degree in Office & Business Education: Transfer Option

The Business Education Program provides the student with the opportunity to acquire not only high-level business and secretarial skills, but the possibility of transferring to a four-year program at a senior institution. Students may study for a Bachelor of Business Education for preparation for a career as a teacher of business subjects or for a Bachelor of Office Administration for preparation for excellent supervisory or management positions in the business world.

### **FIRST SEMESTER**

EN4401	English Composition I	3
	Business Elective	3
	Shorthand *	3
	Typewriting I, II or III **	3
HI9901	Western Civilization I	3

### **CREDITS**

EN4402	English Composition II	3
	Shorthand	3
	Typewriting II, III or IV	3
PS1101	Introduction to Psychology	3
HI9902	Western Civilization II	3

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### **THIRD SEMESTER**

SH6671	Introductory Shorthand, Dictation & Transcription	
	or	
	or	
SH6672	Advanced Shorthand, Dictation & Transcription	3
SL6661	Secretarial Procedures I	3
	Natural Science Elective	3/4
AC6601	Introductory Accounting I	4
	Typewriting III or Secretarial Science Elective	3

### **CREDITS**

SH6672	Advanced Shorthand, Dictation & Transcription	
	or	
	or	
SH6673	Expert Shorthand, Dictation & Transcription	3
SL6662	Secretarial Procedures II	3
AC6602	Introductory Accounting II	4
	Speech or Literature	3
	Liberal Arts Elective	3

16/17

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\* Choice among SH6621 Principles of Shorthand, SH6622 Intermediate Shorthand, SH6671 Introduction to Shorthand, Dictation and Transcription

\*\* Choose appropriate course after consultation with departmental advisor

## Associate Degree in Administrative Assistant

The Administrative Assistant Associate Degree Program (offered in the Division of Continuing Education and Community Services only) is designed to prepare students for responsible sub-professional careers in the office and business fields. The work of the office administrative assistant provides support and assistance in fields such as general and personnel administration, finances, law, insurance, banking, government and other areas of the professional and business world. This program is primarily intended for individuals with substantial experience in some occupation in the field who wish to prepare themselves for promotional opportunities at the supervisory level. Approval of the chairperson of the Division of Business is necessary for acceptance into this program. Sixty to sixty-three (60/63) credit hours of work are required for graduation.

FIRST SEMESTER		CREDITS	SECOND SEMESTER		CREDITS
EN4401	English Composition I	3	EN4402	English Composition II	3
AC6691	Elements of Accounting I	3	MG6676	Personnel Management	3
or	or		TW6622	Typewriting II	
AC6601	Introductory Accounting I	3/4	or	or	
TW6621	Typewriting I			Business Elective *	3
or	or			Introduction to Psychology	3
	Business Elective *	3	PS1101	Elements of Accounting II	3
	Social Science Elective	3	AC6692	or	
	Business Elective *	3	AC6602	Introductory Accounting II	3/4
		15/16			15/16
THIRD SEMESTER		CREDITS	FOURTH SEMESTER		CREDITS
SL6661	Secretarial Procedures I	3	SL6665	Office Administration	3
TW6631	Typewriting III	3	LW6651	Business Law I	3
CT6631	Introduction to Data Processing	3		Natural Science Elective	3/4
	Business Elective *	3		Business Elective *	3
	Liberal Arts Elective	3		Elective	3
		15			15/16

\* SELECT BUSINESS ELECTIVES FROM THE FOLLOWING LIST: Advertising, Credits and Collections, Elements of Accounting II, Introductory Accounting II, Introduction to Word Processing, Machine Transcription, Office Machines, Principles of Insurance, Principles of Real Estate, Secretarial Field Study, Shorthand I, II or III, Survey of Economics, Principles of Marketing.

## Associate Degree in Administrative Assistant: Education Option

The Administrative Assistant with Education Option Associate Degree Program (offered in the Division of Continuing Education and Community Services only) is designed for students who wish to prepare themselves for responsible office careers in educational organizations such as schools, colleges, universities, or the offices of the Department of Education. A balance and diversity of educational experiences is presented in the area of the liberal arts, educational office management and business skills which will appeal to those planning office careers in educational organizations. Approval of the chairperson of the Division of Business is necessary for acceptance into this program. Sixty to sixty-two (60/62) credit hours of work are required for graduation.

FIRST SEMESTER		CREDITS	SECOND SEMESTER		CREDITS
EN4401	English Composition I	3	EN4402	English Composition II	3
AC6691	Elements of Accounting I	3	ED6670	School Budget & Records Management	3
or	or		TW6622	Typewriting II	
AC6601	Introductory Accounting I	3/4	or	or	
TW6621	Typewriting I			Business Elective *	3
or	or			Personnel Management	3
	Business Elective *	3	MG6672	Introduction to Psychology	3
	Group A Elective **	3	PS1101		
	Social Science Elective	3			
		15/16			15

THIRD SEMESTER		CREDITS	FOURTH SEMESTER		CREDITS
SL6661	Secretarial Procedures I	3	SL6665	Office Administration	3
TW6631	Typewriting III	3	LW6651	Business Law I	3
ED6671	School Law	3		Natural Science Elective	3/4
CT6631	Introduction to Data Processing	3		Business Elective *	3
	Group B Elective ***	3		Liberal Arts Elective	3
		15			15/16

\* SELECT BUSINESS ELECTIVES FROM THE FOLLOWING LIST: Elements of Accounting II, Introductory Accounting II, Introduction to Word Processing, Machine Transcription, Survey of Economics, Mathematics of Business, Office Machines, Secretarial Field Experience, Shorthand I, II or III

\*\* SELECT GROUP A ELECTIVE FROM THE FOLLOWING LIST: Creative Use & Production of A/V Media, Introduction to Library Services, School Administration.

\*\*\* SELECT GROUP B ELECTIVE FROM THE FOLLOWING LIST: Adolescent Psychology, Educational Psychology, Child Psychology

## Associate Degree in Medical Record Technology

The curriculum provides an opportunity to take courses in the Liberal Arts program. In addition, the student will apply knowledge obtained in technical courses through direct application in a clinical setting located off campus. Students who wish to continue their education in a four-year institution should select electives which will fulfill the transfer requirements of the institution they choose. Job opportunities in hospitals, extended care facilities, psychiatric facilities, nursing homes, out-patient clinics, community health centers, state and local health departments, regional medical programs and rehabilitation centers are available.

This program is accredited by the American Medical Association's Committee on Allied Health Education and Accreditation in collaboration with the American Medical Record Association. Students who complete requirements for graduation are eligible to take the National Accreditation Examination of the American Medical Record Association. Sixty-five (65) credit hours of work are required for graduation.

FIRST SEMESTER		CREDITS	SECOND SEMESTER		CREDITS
EN4401	English Composition I	3	EN4402	English Composition II	3
BI5519	Anatomy & Physiology I	4	BI5520	Anatomy & Physiology II	4
MR6605	Medical Terminology I	2	MR6606	Medical Terminology II	2
MR6601	Medical Record Science I	3	MR6602	Medical Record Science II	3
HS6651	Introduction to Health Services	3		Group A Elective **	3
	Typewriting *				
		15			

THIRD SEMESTER		CREDITS	FOURTH SEMESTER		CREDITS
MR6651	Medical Record Science III	3	MR6653	Medical Record Science IV	2
MR6667	Directed Practice I	4	MR6668	Directed Practice II	3
	Social Science Elective	3		Group A Elective **	3
	Liberal Arts Elective	3	MG6676	Personnel Management	3
CT6631	Introduction to Data Processing	3	HS6652	Fundamentals of the Disease Process	3
MR6661	Transcription I	1	MR6662	Transcription II	1
				Elective	3
		17			18

NOTE: Students must provide their own transportation to and from practicum locations.

\* Typewriting MUST be taken before the third semester unless students are able to type 45 wpm with 5 errors or less. Students who must take a typing course are exempt from the free elective listed in the fourth semester.

\*\* GROUP A ELECTIVES: Select one of the following two-course groups: Introduction to Psychology and Social Psychology or Introduction to Sociology and Contemporary Social Problems.



## ***Division of Health Professions***

*offering associate degree programs*

**NURSING**

**EVENING NURSING**

**RADIOLOGIC TECHNOLOGY**

**RESPIRATORY THERAPY TECHNOLOGY**

*offering certificate programs in*

**HEALTH FACILITIES ACTIVITIES DIRECTOR**

**RESPIRATORY THERAPY**

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St. John's Hospital, Lowell, MA

**Suzanne Byrne, CRTT, Chief Therapist**  
Lowell General Hospital, Lowell, MA



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## Certificate Program in Health Facilities Activities Director

The purpose of the one-year Certificate Program in Health Facilities Activities Director is to train students to design, direct and conduct therapeutic recreational activities which would contribute to the overall program of restorative care for patients in nursing homes, rehabilitation centers and extended care facilities. The course is structured to meet the essential requirements for certification of Nursing Home Activity Directors as suggested by the American Nursing Homes.

FIRST SEMESTER		CREDITS	SECOND SEMESTER		CREDITS
EN4401	English Composition I	3	EN4402	English Composition II	3
PS1101	Introduction to Psychology	3	HS6681	Psychology of Health Care Delivery	3
EN8011	Speech	3		Elective	3
HS6691	Internship I	3	HS6692	Internship II	3
HS6661	Therapeutic Recreational Skills I	3	HS6662	Therapeutic Recreational Skills II	3

## Associate Degree in Nursing

Nursing at Northern Essex is a comprehensive, demanding program. Seventy (70) credit hours of work (37 nursing credits and 33 general education credits) are required for graduation and satisfactory performance is required in all laboratory courses. Graduates are prepared to write the State Board Examination for Professional Nurse Licensure as a registered nurse. The program is fully approved by the Board of Registration in Nursing and accredited by the National League for Nursing.

### THE CURRICULUM

**SEQUENCE OF COURSES:** The Nursing curriculum has been structured in a special sequence. Students are required to follow this sequence of courses throughout the entire four semesters of the Nursing program. Students are also required to complete successfully all courses in each semester before proceeding to the next semester.

**GRADING:** The final grade in a Nursing course is based on theory and performance in the clinical laboratory. A failure in either area constitutes failure for the course.

**TRAVEL:** Students are responsible for their own transportation to and from clinical agencies. Day clinical laboratory experience is scheduled every Tuesday and Thursday each week; evening clinical laboratory experience is scheduled two evenings per week. Students may request experience in a specific clinical agency; however, final decision regarding the placement of students rests with the Nursing faculty. **NOTE:** On occasion, conferences may be scheduled at the college during clinical hours requiring students to return to the college from the clinical agency.

**MALPRACTICE INSURANCE:** All Nursing students are required to carry malpractice insurance. The premium is to be paid prior to the beginning of classes. Students may not participate in the Nursing program without malpractice insurance coverage.

**HEALTH:** Nursing students are required to complete a health evaluation prior to beginning the Nursing program. The college's Student Health Services clinic will designate when this information is due at the college.

FIRST SEMESTER [FALL]		CREDITS	SECOND SEMESTER [SPRING]		CREDITS
NS6601	Fundamentals of Nursing	8	NS6602	Maternal and Child Health Nursing	8
BI5519	Anatomy & Physiology I	4	BI5520	Anatomy & Physiology II	4
EN4401	English Composition I	3	EN4402	English Composition II	3
PS1101	Introduction to Psychology	3	SO3331	Marriage & the Family	3
		18			18

**NOTE:** BI5519, EN4401 and PS1101 must be taken prior to or concurrently with Fundamentals of Nursing.

**NOTE:** BI5520, EN4402 and SO3331 must be taken prior to or concurrently with Maternal and Child Health Nursing.

THIRD SEMESTER [FALL]		CREDITS	FOURTH SEMESTER [SPRING]		CREDITS
NS6651	Mental & Physical Illness I	8	NS6652	Mental & Physical Illness II	10
SO3321	Introduction to Sociology	3	NS6682	Seminar on Nursing	3
BI5553	Microbiology	4		Social Science Elective **	3
	Humanities Elective *	3			16
		18			

**NOTE:** SO3321, BI5553 and the humanities elective must be taken prior to or concurrently with Mental & Physical Illness I

**NOTE:** NS6682 and the Social Science Elective must be taken prior to or concurrently with Mental & Physical Illness II.

\* Humanities elective courses: foreign language, communications, philosophy, art, music.

\*\* Social Science Elective: Contemporary Social Problems, Social Psychology, Adolescent Psychology, Cultural Anthropology, Problems in Early Childhood Education, Child Psychology, Abnormal Psychology.

**PROGRAM PREREQUISITES:** 4 years of high school English, 2 years of science [one year must be a laboratory course in chemistry]; 2 years of mathematics [at least one year of algebra] and 2 years of a social science.

# The Evening Nursing Program

The Evening Nursing Program is offered through the Division of Continuing Education and Community Services. The program of studies and the educational background required is identical to that of the Day Division Program. Students may complete the program in a four-year schedule of part-time study. Students will consider the fundamentals of nursing during the first year. The second year is an in-depth study of maternal and child health care. Studies in the third and fourth years concentrate on medical and surgical nursing. The program requires two evenings per week of classroom and clinical study.

The Evening Nursing Program requires a strong commitment from students to complete a four-year course of part-time study. It is possible, however, for students to fulfill the Liberal Arts requirements outside the Division of Continuing Education and Community Services.

The Evening Nursing Program is accredited by the National League for Nursing. The program requires seventy (70) credit hours of work for graduation.

<b>FIRST YEAR: FALL SEMESTER</b>	<b>CREDITS</b>	<b>FIRST YEAR: SPRING SEMESTER</b>	<b>CREDITS</b>
NS6601 Fundamentals of Nursing *	8	NS6601 Fundamentals of Nursing *	
BI5519 Anatomy & Physiology I	4	BI5520 Anatomy & Physiology II	4
PS1101 Introduction to Psychology	3	EN4401 English Composition I	3
	15		7

**NOTE: BI5520, EN4401 and PS1101 must be taken prior to or concurrently with Fundamentals of Nursing.**

<b>SECOND YEAR: FALL SEMESTER</b>	<b>CREDITS</b>	<b>SECOND YEAR: SPRING SEMESTER</b>	<b>CREDITS</b>
BI5553 Microbiology **	4	SO3331 Marriage & the Family **	3
NS6602 Maternal & Child Health Nursing *	8	NS6602 Maternal & Child Health Nursing *	
EN4402 English Composition II **	3	Humanities Elective †	3
	15		6

**NOTE: Fundamentals of Nursing must be taken prior to Maternal & Child Health Nursing. BI5553, EN4402, SO3331 and the Humanities elective must be taken prior to or concurrently with Maternal & Child Health Nursing.**

<b>THIRD YEAR: FALL SEMESTER</b>	<b>CREDITS</b>	<b>THIRD YEAR: SPRING SEMESTER</b>	<b>CREDITS</b>
NS6651 Mental & Physical Illness I *	8	NS6651 Mental & Physical Illness I *	
SO3321 Introduction to Sociology	3	Social Science Elective ‡	3
	11		3

**NOTE: Maternal and Child Health Nursing must be taken prior to Mental & Physical Illness I.**

<b>FOURTH YEAR: FALL SEMESTER</b>	<b>CREDITS</b>	<b>FOURTH YEAR: SPRING SEMESTER</b>	<b>CREDITS</b>
NS6652 Mental & Physical Illness II *	10	NS6652 Mental & Physical Illness II	
NS6682 Nursing Seminar	3		
	13		

**NOTE: Mental and Physical Illness I must be taken prior to Mental & Physical Illness II and Nursing Seminar [the Nursing Seminar is offered in the Fall Semester only]. Nursing courses are offered in the sequence stated above only.**

**Nursing I, II, III are 8-credit courses; Nursing IV is 10 credits. These courses are one academic year in length.**

**\*\* These courses may be taken during the summer sessions as long as they follow the sequence stated above.**  
**Humanities elective: course in a foreign language, communications, philosophy, art or music.**

**† Social Science elective: one of following courses - Child, Abnormal, Social or Adolescent Psychology, Contemporary Social Problems, Cultural Anthropology or Problems of Early Childhood Education. [Introduction to Psychology is a prerequisite to this elective.]**

**‡‡ NOTE: Any deviation from the planned schedule can be made only with written permission from the Evening Nursing Director. It is the responsibility of the student to be knowledgeable regarding when courses are offered and plan accordingly.**



## Associate Degree in Radiologic Technology

All of the technical studies in the Radiologic Technology Associate Degree Program are closely interconnected with clinical experiences - you put your classroom-learned techniques to work at once under supervision. You'll be ready to take the national board examination sponsored by the American Association of Radiological Technologists when you graduate. The successful completion of this exam qualifies you as a radiologic or x-ray technologist. Sixty-six (66) credit hours of work are required for graduation.

**INTRODUCTION:** From July 1 to August 30 of the summer prior to the first semester of work in this program, each student must complete RT6501, Introduction to Radiologic Technology, as three-credit orientation course.

FIRST SEMESTER		CREDITS	SECOND SEMESTER		CREDITS
EN4401	English Composition I	3	EN4402	English Composition II	3
BI5519	Anatomy & Physiology I	4	BI5520	Anatomy & Physiology II	4
RT6511	Radiologic Science I	3	RT6512	Radiologic Science II	3
	Mathematics Elective	3		Social Science Elective	3
RT6517	Radiologic Orientation I	5	RT6518	Radiologic Orientation II	5
		18			18

**SUMMER SESSION:** Required ten-week practicum in approved area hospital.

THIRD SEMESTER		CREDITS	FOURTH SEMESTER		CREDITS
RT6571	Seminar I	3		Mathematics Elective	3
	Liberal Arts Elective	3	RT6572	Seminar II	3
RT6551	Radiologic Technology I	3	RT6552	Radiologic Technology II	3
RT6561	Principles of Radiologic Technology I	6	RT6562	Principles of Radiologic Technology II	6
		15			15

**CLINICAL HOURS:** This program requires successful completion of 2,564 clinical hours at one of the college's five affiliating hospitals. These clinical hours are spread out over a 24-month period of time, concurrent with the four-semester curriculum.

**PROGRAM PREREQUISITES:** No specific prerequisites are necessary for this program, however, a college preparatory high school program and satisfactory performance in high school mathematics and science courses are highly recommended.

**NOTE:** Students admitted to this program must also meet the admission requirements of the affiliate hospital in which they will receive their clinical experience. Contact the Admissions Office at Northern Essex for more information.

## Associate Degree in Respiratory Therapy Technology

The Respiratory Therapy Technology Associate Degree Program gives you a theoretical background which you will apply, under medical supervision, as you work with patients in affiliate hospitals. You will also learn, and practice, the use and maintenance of respiratory therapy equipment. Graduates are prepared to sit for the examination given by the National Board for Respiratory Therapy to become registered respiratory therapists. Sixty-six (66) credit hours of work are required for graduation.

FIRST SEMESTER		CREDITS	SECOND SEMESTER		CREDITS
EN4401	English Composition I	3	EN4402	English Composition II	3
BI5519	Anatomy & Physiology I	4	BI5520	Anatomy & Physiology II	4
RT6611	Respiratory Therapy I	6	RT6621	Respiratory Therapy II	6
RT6612	Respiratory Therapy Practicum I	4	RT6622	Respiratory Therapy Practicum II	4
		17			17
THIRD SEMESTER		CREDITS	FOURTH SEMESTER		CREDITS
	Elective	3	RT6641	Respiratory Therapy IV	6
RT6631	Respiratory Therapy III	6	RT6649	Respiratory Therapy Seminar	2
BI5553	Microbiology	4		Humanities or Social Science Elective	3
RT6632	Respiratory Therapy Practicum III	4	RT6642	Respiratory Therapy Practicum IV	4
		17			15

**PROGRAM PREREQUISITES:** No specific prerequisites are necessary for this program; however, a college preparatory high school program and satisfactory performance in high school mathematics and sciences is highly recommended.

## Certificate Program in Respiratory Therapy

The one-year Certificate Program in Respiratory Therapy is a duplicate of the first year of the associate degree program; additional experience in direct patient care areas is provided during the summer session. Graduates are prepared to sit for the examination given by the National Board for Respiratory Therapy to become certified respiratory therapy technicians. Thirty-eight (38) credit hours of work are required for the certificate.

FIRST SEMESTER		CREDITS	SECOND SEMESTER		CREDITS
EN4401	English Composition I	3	EN4402	English Composition II	3
BI5519	Anatomy & Physiology I	4	BI5520	Anatomy & Physiology II	4
RT6611	Respiratory Therapy I	6	RT6621	Respiratory Therapy II	6
RT6612	Respiratory Therapy Practicum I	4	RT6622	Respiratory Therapy Practicum II	4
		17			17

### SUMMER SESSION

### CREDITS

RT6629 Seminar for Respiratory Therapy Technicians 4

# **DIVISION of HUMAN SERVICES**

*offering associate degree programs in*

**CRIMINAL JUSTICE:**

**LAW ENFORCEMENT OPTION**

**SECURITY OPTION**

**DEAFNESS COMMUNICATION**

**EARLY CHILDHOOD EDUCATION**

**EDUCATIONAL ASSISTANT:**

**LANGUAGE COMMUNICATION**

**ASSISTANT OPTION**

**FIRE PROTECTION & SAFETY TECHNOLOGY**

**GERONTOLOGY**

**GERONTOLOGY:**

**NURSING HOME ADMINISTRATION**

**LIBRARY ASSOCIATE**

**MENTAL HEALTH TECHNOLOGY**

*offering certificate programs in*

**CRIMINAL JUSTICE:**

**SECURITY OPTION**

**DEARNESS COMMUNICATION**

**EDUCATIONAL ASSISTANT:**

**LANGUAGE COMMUNICATION  
AIDE OPTION**

**GERONTOLOGY**

**LIBRARY ASSISTANT**

**MENTAL HEALTH TECHNOLOGY:**

**HOUSE MANAGER OPTION**



The Human Services Division provides a number of opportunities for developing job entry skills and for upgrading skills for persons presently employed. The field of human services is dynamic and changing. New career opportunities are emerging continuously as we, as a society, continue to accept increased responsibility for meeting the needs of those who cannot do so for themselves; those who need help in helping themselves; and for meeting the basic needs of our society for personal security.

The college has responded to the needs of the Merrimack Valley by developing a number of career programs designed to prepare people to enter the emerging fields, as well as to assist those already in the field to improve their skills and to climb the career and academic ladders. The programs in the Division of Human Services are community based and provide a great deal of opportunity for experiential learning. This approach results in a more exciting, realistic, and meaningful experience for persons preparing to enter a specific career field and those persons seeking an opportunity for career explorations.

Many of the Division's career programs are offered on a full-time basis, including Early Childhood Education, Mental Health Technology, House Manager, Criminal Justice Options in Law Enforcement and Security, Gerontology and Deafness Communication. Other programs are presently offered on a part-time basis in the Division of Continuing Education and Community Services. These include Educational Assistant, Language Communication Aide Certificate, Language Communication Assistant Degree Program, Fire Protection and Safety Technology, Deafness Communication Certificate, Gerontology Certificate, Criminal Justice option in Security Certificate and Criminal Justice degree program options in Law Enforcement and Security, and the Library Associate Degree Program and Library Assistant Certificate Program.

Students are encouraged to seek counseling in areas of interest and to matriculate as students in the Division of Continuing Education and Community Services as soon as possible.

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## **ADVISORY BOARD**

### **Criminal Justice**

**Albert Burns, First Assistant Clerk**  
Third District Court of Eastern Middlesex  
Belmont, MA

**J. William Codinha, Chief, Homicide Division**  
Middlesex County District Attorney's Office  
Superior Court House, Cambridge, MA

**Richard Galeazzi, DCE Student**  
Northern Essex Community College, Haverhill, MA

**Joseph Garand, Deputy Marshal**  
Newburyport Police Department, Newburyport, MA

**Constantine Gianoukos, Special Agent,**  
Intelligence Division, U.S. Department of Treasury

**Edward Higgins, Ret. Lieutenant**  
Massachusetts State Police, Methuen, MA

**Ronald Jesser, First Assistant Chief of Probation**  
Lawrence Superior Court, Lawrence, MA

**Joseph Lipchitz, Coordinator**  
Department of Administration of Law and Justice  
University of Lowell, Lowell, MA

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Lawrence, MA

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Northern Essex Community College, Haverhill, MA

**Denise Rouleau, College Student, Day Division**  
Northern Essex Community College, Haverhill, MA

**Terrance Schiavone, Superintendent, Public Safety**  
Lawrence Department of Public Safety, Lawrence, MA

**Robert Tyrrell, Chief**  
Dracut Police Department, Dracut, MA

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## **ADVISORY BOARD**

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**Frances Barrett, Day Care Group Licensing Agent**  
Office for Children, Region IV, Middleton, MA

**Grace Bernardin, Family Day Care Consultant**  
No. Andover, MA

**Deborah Davis, NECC Early Childhood Education student**  
Newburyport, MA

**Sandra DeVellis, Director, Pentucket Workshop**  
Pentucket Workshop, Georgetown, MA

**Barbara Ditchett, Family Day Care Coordinator**  
Office for Children Region IV, Middleton, MA

**Lynn Kay, Kindergarten teacher**  
Peabody School, Haverhill

**Dr. Robert J. Lane, Superintendent of Schools**  
Haverhill School Department, Haverhill, MA

**Ann Minahan, Director, Headstart**  
Lawrence, MA

**Joan Parker, Staff Development Specialist**  
Early Childhood Education, North East Regional Center  
No. Andover, MA

**Patricia Regan, Director, ESEA Title I**  
Haverhill School Department, Haverhill, MA

**Lois Richardson,**  
NECC Early Childhood Education graduate  
Haverhill, MA

**Irene Rochwarg, Director, ECLC Learning Center**  
No. Andover, MA

**Charlotte Sutton, Director**  
Spring Street School, Newburyport, MA

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## **ADVISORY BOARD**

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National Fire Protection Association, Lexington, MA

**Lewis Burton, Chief**  
Haverhill Fire Department, Haverhill, MA

**Joseph Donovan, Chief, Fire Training**  
Massachusetts Firefighting Academy, Sudbury, MA

**Arthur Gaudet, Chief**  
Amesbury Fire Department, Amesbury, MA

**Robert Hall, District Supervisor**  
Mutual Fire Insurance Association of New England  
Reading, MA

**Richard Lacey, Chief**  
Lawrence Fire Department, Lawrence, MA

**Joseph O'Keefe, Fire Marshal**  
Commonwealth of Massachusetts, Boston, MA

**John R. Parks, Private**  
Newburyport Fire Department, Newburyport, MA

## **ADVISORY BOARD** **Gerontology**

**Mrs. Amy Alberts, Director**  
Home Health Services, Haverhill, MA

**Ms. Janet Boulanger, Administrator**  
Glynn Memorial Nursing Home, Haverhill, MA  
Representative, Division of Continuing Education, NECC

**Ms. Ruth Bradley, Elder Citizen**  
Haverhill, MA

**Ms. Jeanette Courtemanche, Chairperson**  
Greater Lawrence Council on Aging, Methuen, MA

**Reverend Norman Crook, Director**  
Bethany Homes, Haverhill, MA

**Ms. Josephine G. Delva, Co-Chairperson**  
NECC Advisory Board of Elders Program, Haverhill, MA

**Ms. Rosanne DiStefano, Community Coordinator**  
Elder Services of Merrimack Valley

**Ms. Mary Farr, MSW, Director, Senior Counseling Service**  
Greater Lawrence Mental Health Center, Lawrence, MA

**Ms. Janice Franck, Director**  
Haverhill Council on Aging

**Ms. May Futrell, Ph.D., Director**  
Gerontological N. Practitioner Program  
University of Lowell, Lowell, MA

**Mr. Ben Hersey, Representative**  
Division of Continuing Education Faculty  
Northern Essex Community College, Haverhill, MA

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Haverhill Chapter, Haverhill, MA

**Fr. Marcel Lajoie, S.M., Resident Chaplain**  
Bon Secours Hospital, Methuen, MA

**Ms. Joan Lanning, Project Coordinator Gerontological Ed.**  
Haverhill High School, Haverhill, MA

**Ms. Inez Lund, Chairperson, Councils on Aging**  
Haverhill/Newburyport

**Mrs. Ruth A. McCarthy, MSW**  
Lawrence Catholic Charitable Bureau

**Mr. Don McCaul, MSW, Director**  
Children's Aid & Family Soc., Haverhill, MA

**Mrs. Amy Olenio, DCE Student**  
Northern Essex Community College, Haverhill, MA

**Mr. Bernard O'Neill, Regional Coordinator**  
Mass Department of Elder Affairs, Boston, MA

**Ms. Jane Stewart, Day Student**  
Northern Essex Community College, Haverhill, MA

**Duane Windemiller, Ph.D. Faculty Representative**  
Northern Essex Community College, Haverhill, MA

## **ADVISORY BOARD** **Language** **Communication**

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North East Regional Center, No. Andover, MA

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Cashman Elementary School, Amesbury, MA

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Bilingual Programs, Lawrence, MA

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Title I Aide, Haverhill, MA

**Joan Connolly, Graduate**  
Title I Aide, Haverhill, MA

**Joseph Connolly, Principal**  
Woburn Street School, Wilmington, MA

**Doreen Fay, Resource Room Specialist, Instructor**  
Bagnall School, Groveland, MA

**Linda Gilmartin, teacher**  
Merrimac, MA

**Peg Gould, Special Needs Teacher**  
Belleville School, Newburyport, MA

**Mary Ann Kraunelis, teacher**  
Lawrence, MA

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Northern Essex Community College, Haverhill, MA

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Language Communication Aide, Wilmington, MA

**Kathy Sworobowicz, Graduate, Language Aide**  
Newburyport, MA

**Manny Thomas, Personnel Director**  
Chelmsford Schools, Chelmsford, MA

**Dr. Robert Walsh, Pupil Service Director**  
Methuen, MA

**Diane Wekelo, Language Specialist, Instructor**  
Lawrence, MA

**Maureen White, Reading Specialist, Instructor**  
Haverhill, MA



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## **ADVISORY BOARD** **Library**

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Haverhill, MA

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Massachusetts Bureau of Library Extension, Boston, MA

**Marilyn Harris, Media Director**  
Methuen Public Schools, Methuen, MA

**Nancy Isaacs, Media Director**  
Lasell Junior College, Auburndale, MA

**Nancy C. Jacobson, Director**  
Memorial Hall Library, Andover, MA

**Pat Parker, Librarian, Learning Resource Center**  
Northern Essex Community College, Haverhill, MA

**Gail G. Reinertsen, Reference Librarian**  
Haverhill Public Library, Haverhill, MA

**Mary E. Sexton, Librarian Supervisor**  
Western Electric Co., No. Andover, MA

**Richard St. Pierre, Media Director**  
North Shore Community College, Beverly, MA

**Sue Towne, Librarian, Learning Resource Center**  
Northern Essex Community College, Haverhill, MA

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## **ADVISORY BOARD** **Security**

**Frank Baggett, Security Manager**  
Systems Division, AVCO

**Evo Bernardini, Chief of Security**  
Gillette Corporation

**Joseph DeRosa, Education Department**  
Northeast Regional Center

**Fritz Diegisser, Director of Security**  
Phillips Andover Academy

**Edward Higgins, President**  
Ed Higgins Associates, Methuen, MA

**John Kiley, Director of Security**  
Merrimack College

**Paul LaRochelle, Student, Day Division**  
Northern Essex Community College, Haverhill, MA

**Martin Lawlor, Director of Security**  
Bon Secours Hospital, Methuen, MA

**James Olivier, Director of Security**  
Mass Institute of Technology, Cambridge, MA  
**Massachusetts Chairman**  
International Assoc., Col. and Univ. Security Directors

**John Peters, Security Instructor, Assistant, Chief of Police**  
Braintree, MA

**Victor Piscatello, President Victor Security**  
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**Thomas H. Sullivan, Director of Security, The Seiler Corp.**  
American Society for Industrial Security

**Thomas Tighe, Area Manager, CPP Security**  
Acton, MA

**George Wall, Security Director**  
Lawrence General Hospital, Lawrence, MA

**Richard Wolkivits, Director of Security**  
New England Nuclear Corp., Billerica, MA

Criminal Justice is a multi-faceted program encompassing options in law enforcement and security. The curricula are designed to prepare students for professional careers, whether they are pre-service or already working in a criminal justice field. Successful candidates can earn associate degrees in either option. Both the Law Enforcement and Security options are included in a comprehensive day program for full-time students. The Day Division programs are complemented by programs offered through the Division of Continuing Education and Community Services. Core Criminal Justice courses offered in the Day Division may be closed to students not enrolled in the Criminal Justice Program.

## Associate Degree in Criminal Justice: Law Enforcement

The Law Enforcement Program provides professional education for in-service police personnel as well as those preparing for careers in municipal, state and federal law enforcement and investigative agencies. The curriculum emphasizes a broad, interdisciplinary approach to the values, goals and problems of law enforcement. The primary objective of the program is to promote professionalism in the field of police work. Upon successful completion of the Law Enforcement Option, students will be awarded an Associate in Science Degree, which may be applied toward a baccalaureate degree upon transfer to a four-year institution. The Law Enforcement Program is offered in the Day Division and through the Division of Continuing Education and Community Services. Sixty-four (64) credit hours of work are required for graduation.

FIRST SEMESTER		CREDITS	SECOND SEMESTER		CREDITS
EN4401	English Composition I	3	EN4402	English Composition II	3
PS1101	Introduction to Psychology	3		Mathematics Requirement **	3
SO3321	Introduction to Sociology	3	GV3314	State and Local Government	3
LE3603	Introduction to Criminal Justice *	3	SO3353	Introduction to Criminology	3
LE3601	Concepts of Criminal Law *	3	LE3654	Procedural Law *	3
		15	LE3650	Patrol Functions	3
					18
THIRD SEMESTER		CREDITS	FOURTH SEMESTER		CREDITS
EN8011	Speech	3	GV3315	Civil Rights and Liberties	3
	Mathematics or Natural Science Requirement *	3	PE2002	First Aid & Safety	3
		3	LE3667	Crisis Intervention *	3
LE3606	Community Relations in Criminal Justice *	3	LE3670	Senior Seminar	
LE3653	Criminal Investigation	3	or		
LE3602	Law Enforcement Planning and Management	3	LE3672	Field Practicum */***	3
PE1019	Physical Conditioning	1		Elective	3
					15
		16			

\* Core Criminal Justice Courses

\*\* The following courses are unacceptable as mathematics electives: MA0500, MA0501, MA5512, MA5691.

\*\*\* Field Practicum is optional for pre-service students; Senior Seminar can be elected in lieu of Field Practicum.

## Associate Degree in Criminal Justice: Security

The Security Program (an option to the Criminal Justice Associate Degree Program) is designed to prepare pre-service aspirants and meet the needs of those already working in the security field. The curriculum has been formulated to develop managerial skills and foster technical proficiency in preparation for professional careers. Successful completion of the security option results in an associate in science degree. Courses in this option are offered through the Division of Continuing Education and Community Services in addition to the day program. Sixty-four (64) credit hours of work are required for graduation.

FIRST SEMESTER		CREDITS	SECOND SEMESTER		CREDITS
EN4401	English Composition I	3	EN4402	English Composition II	3
PS1101	Introduction to Psychology	3		Math Requirement **	3
SO3321	Introduction to Sociology	3	GV3314	State and Local Government	3
LE3603	Introduction to Criminal Justice *	3	SO3353	Introduction to Criminology	3
LE3601	Concepts of Criminal Law *	3	LE3654	Procedural Law *	3
			SE1001	Introduction to Security	3
		15			
					18
THIRD SEMESTER		CREDITS	FOURTH SEMESTER		CREDITS
EN8011	Speech	3	CV3315	Civil Rights and Liberties	3
	Math or Natural Science Requirement **	3	PE2002	First Aid and Safety	3
LE3606	Community Relations in Criminal Justice *	3	LE3667	Crisis Intervention *	3
SE1003	Security Administration	3	LE3670	Senior Seminar	
SE1005	Principles of Loss Prevention	3		or	
PE1019	Physical Conditioning	1	LE3672	Field Practicum */*** Elective	3
		16			
					15

\* Core Criminal Justice courses

\*\* The following courses are unacceptable as mathematics electives: MA0500, MA0501, MA5512.

\*\*\* Field Practicum is optional for pre-service students; Senior Seminar can be elected in lieu of Field Practicum.

## Certificate in Security

The one-year Security Certificate Program is designed to provide basic training for persons already employed as guards, investigators, private patrolmen, etc. who wish to upgrade their skills and for persons interested in completing basic training for security positions in one year. All courses in the certificate program may be applied toward the associate degree in Criminal Justice. Thirty (30) credit hours of work are required for the certificate.

FIRST SEMESTER		CREDITS	SECOND SEMESTER		CREDITS
EN4401	English Composition I	3	EN4402	English Composition II	3
GV3314	State and Local Government	3	LE3606	Community Relations in Criminal Justice	3
LE3603	Introduction to Criminal Justice	3	LE3654	Procedural Law	3
LE3601	Concepts of Criminal Law	3	SE1003	Security Administration	3
SE1001	Introduction to Security	3	SE1005	Principles of Loss Prevention	3
		15			
					15

## Associate Degree in Early Childhood Education

The Early Childhood Education Associate Degree Program is career-oriented and trains students for a paraprofessional role in the field of early childhood education. How children grow, develop and learn will become more meaningful through course work, directed observation and through the study of the child both as an individual and as he functions in a variety of group settings. An integral part of this program is, therefore, the practicum placement which allows the student to apply theory and skills under guidance and supervision in a variety of classrooms and educational programs. The program also provides the foundation for further study in the field of early childhood education. Sixty-six to sixty-seven (66/67) credit hours of work are required for graduation. All courses prefaced by "CC" are restricted to students accepted and enrolled in the Early Childhood Education program. Other students may elect these courses only with written permission of the Early Childhood Education Coordinator.

FIRST SEMESTER	CREDITS	SECOND SEMESTER	CREDITS
EN4401 English Composition I	3	EN4402 English Composition II	3
PS1101 Introduction to Psychology	3	PS1151 Child Psychology	3
BI5510 Human Biology	3	ED0401 Teaching Reading in Early Childhood	3
CC2201 Introduction to Early Childhood Education	3	CC2313 Practicum I	3
FA7012 Introduction to the Creative Experience	3	PE2293 Innovative Movement Experiences: Childhood to Adult	2
CC2311 Observation & Recording of Child Behavior	1	Natural Science Requirement	3/4
	16		
			17/18
THIRD SEMESTER	CREDITS	FOURTH SEMESTER	CREDITS
EN8011 Speech	3	CC2364 Seminar in Early Childhood Education	3
PS2112 Problems in Early Childhood Education	3	MA0500 Teaching Early Childhood Ed Math	3
CC2363 Practicum II	4	CC2354 Practicum III	5
Humanities Elective *	3	PE2002 First Aid & Safety	3
Sociology Elective **	3	Elective ***	3
	16		17

\* Course in one of the following areas: foreign languages, history, philosophy, art, music, literature or religion

\*\* All courses prefixed SO in the catalog are sociology courses.

\*\*\* Persons who wish to transfer to other colleges should elect courses which satisfy the requirements of those colleges and of the Commonwealth Transfer Compact.

## Associate Degree in Educational Assistant

The Educational Assistant Associate Degree Program\*, provides training in basic principles of group and individual learning processes, the basic problems in learning, and the development of effective interpersonal relationships with the educational staff and students. Close relationships with schools in the area have been developed to give students progressively more involved classroom experiences in the roles of educational assistants, and to develop skills in assisting teachers in a wide variety of classroom and supportive educational activities. Sixty-four to sixty-six (64/66) credit hours of work are required for graduation.

\*Currently offered in the Division of Continuing Education and Community Services only.

FIRST SEMESTER	CREDITS	SECOND SEMESTER	CREDITS
EN4401 English Composition I	3	EN4402 English Composition II	3
PS1151 Child Psychology	3	ED2212 Classroom Experience I *	4
PS2114 Problems of the School-Age Child	3	PE2293 Innovative Movement Experiences: Childhood to Adult	2
ED2210 Introduction to Classroom Experience *	1	FA7012 Creative Experience	3
LS0131 Media Workshop	1	ED0403 Teaching Reading in the Elementary Grades	3
MS5512 Contemporary Math for Elementary Teachers	3		
ED2244 Introduction to the Role of Educational Assistant	3		15
	17		
THIRD SEMESTER	CREDITS	FOURTH SEMESTER	CREDITS
EN8401 Children's Literature	3	ED2262 Education Seminar	3
ED2255 Classroom Experience II *	4	ED2256 Classroom Experience III *	4
EN1278 Teaching English as a Second Language*	3	Elective	3
Elective	3	Natural Science Elective	3/4
Natural Science Elective	3/4	PE2002 First Aid & Safety	3

16/17

16/17

\* These courses are open to students matriculated in the Educational Assistant program only. Other students may elect these courses only with permission of the Program Coordinator.

\*\* If this course is not available another humanities course may be chosen with the approval of the Program Coordinator.



## Associate Degree in Educational Assistant with option in Language Communication Assistant

The Language Communication Assistant Associate Degree Program (an Option to the Educational Assistant Program) is designed to provide job entry skills, career exploration and transfer to bachelor degree programs. The Communication Assistant will have the skills to perform carry-over activity for persons with problems in any of the language communication areas. The Communication Assistant will be able to perform support services for the classroom teacher, the learning disability and reading specialists, and the speech and language therapist. The graduate will be able to work perceptively with children having language disorders, follow up knowledgeably a prescribed learning program, complete direct carry-over activities, write progress reports and create instructional materials. Graduates will meet the certification guidelines of the American Speech and Hearing Association. Sixty-four to sixty-six (64/66) credit hours of work are required for graduation.

FIRST SEMESTER		CREDITS	SECOND SEMESTER		CREDITS
EN4401	English Composition I	3	EN4402	English Composition II	3
PS1151	Child Psychology	3	ED2212	Classroom Experience I *	4
PS2114	Problems of the School-Age Child	3	ED2203	Introduction to Language Communications Disorders	3
ED2110	Introduction to Classroom Experience */***	1	ED0403	Teaching Reading in the Elementary Grades	3
ED2244	Introduction to the Role of the Educational Assistant	3		Elective	3
MA5512	Contemporary Mathematics for Elementary Teachers	3			16
		16			
THIRD SEMESTER		CREDITS	FOURTH SEMESTER		CREDITS
EN1278	Principles of Teaching English as a Second Language **	3	ED2262	Education Seminar	3
ED2255	Classroom Experience II *	4	ED2256	Natural Science Requirement	3/4
	Natural Science Requirement	3/4	ED2256	Classroom Experience III *	4
ED2201	Introduction to Learning Disabilities	3	ED2206	Elective	3
EN8401	Children's Literature	3	ED2206	An Introduction to Speech Disorders	3
		16/17			16/17

\* These courses are open to students matriculated in the program only. Other students may elect these courses only with permission of the Program Coordinator.

\*\* If this course is not available, another humanities course may be elected with permission of the Program Coordinator.

\*\*\* This course is a prerequisite to Introduction to Speech Disorders.

NOTE: ED2260 Intensive Classroom Experience may be taken in place of ED2212, ED2255 or ED2266 with permission of the Program Coordinator.

## **Certificate in Educational Assistant with option in Language Communication Aide**

The Language Communication Aide One-year Certificate Program (an Option to the Educational Assistant Program) is designed primarily to provide education and training for persons seeking entry level skills as paraprofessionals. The Communication Aide will have the skills to perform carry-over activities for persons with problems in any of the language communication areas. The Communication Aide will be able to perform support services for the classroom teacher, the learning disability and reading specialists, and the speech or language therapist. The graduate will be able to perceptively work with children having language disorders to provide knowledgeable follow-up of a prescribed learning program, complete direct carry-over activities, write progress reports and create instructional materials. Graduates will meet the certification guidelines of the American Speech and Hearing Association. The credits earned may be applied toward the degree requirements of the Language Communication Assistant Associate Degree Program. Thirty-two (32) credit hours of work are required for graduation.

<b>FIRST SEMESTER</b>		<b>CREDITS</b>	<b>SECOND SEMESTER</b>		<b>CREDITS</b>
EN4401	English Composition I	3	EN4402	English Composition II	3
PS1151	Child Psychology	3	ED0403	Teaching Reading in the Elementary Grades	3
PS2114	Problems of the School-Age Child	3	ED2201	Introduction to Learning Disabilities *	3
ED2203	Introduction to Language Communications Disorders	3	ED2212	Classroom Experience I	4
ED2210	Introduction to Classroom Experience **/***	1	ED2206	An Introduction to Speech Disorders	3
ED2244	Introduction to the Role of the Educational Assistant	3			16

16

\* These courses are open to students enrolled in the program only. Other students may elect these courses only with permission of the Program Coordinator.

\*\* The Program Coordinator may recommend that this course be waived for persons with demonstrable and appropriate experience as an educational assistant. A one-credit course may be required in its place in order to earn the required number of credits for graduation.

\*\*\* This course is a prerequisite to Introduction to Speech Disorders.

## **Associate Degree in Fire Protection and Safety Technology**

The Fire Protection and Safety Technology Associate Degree Program is designed to provide professional education to students interested in careers as technicians in fire protection and safety agencies. Career opportunities are available in municipal, state and federal agencies, industry and insurance companies. This program offers practical and technical instruction for potential firefighters and those in-service firefighters wishing to upgrade their career status, as well as those personnel working in business and insurance industries who are concerned with the field of fire protection and safety. All fire protection courses in this program are offered only in the Division of Continuing Education and Community Services. Sixty-three (63) credit hours of work are required for graduation.

<b>FIRST SEMESTER</b>		<b>CREDITS</b>	<b>SECOND SEMESTER</b>		<b>CREDITS</b>
EN4401	English Composition I	3	EN4402	English Composition II	3
MA5511	Survey of Basic Mathematics *	3	SC5511	Physical Science I **	4
GV3314	State and Local Government	3	EN8011	Speech	3
PS1101	Introduction to Psychology	3	FP1002	Fundamentals of Fire Prevention	3
PE1019	Physical Conditioning	1	FP1004	Building Construction Systems	3
FP1001	Introduction to Fire Protection & Safety	3			16

16

<b>THIRD SEMESTER</b>		<b>CREDITS</b>	<b>FOURTH SEMESTER</b>		<b>CREDITS</b>
SC5512	Physical Science II **	4	MG6676	Personnel Management	3
SO3321	Principles of Sociology	3	FP1007	Fire Protection Hydraulics	3
FP1005	Fire Protection Systems & Equipment	3	FP1009	Chemistry of Hazardous Materials	3
	Elective	3		Elective	3
	Elective	3		Elective	3

16

15

\* Another math course may be selected with permission of the program coordinator.

\*\* Another physical science course may be selected with permission of the program coordinator.

## Associate Degree in Gerontology

In addition to developing an awareness and understanding of the process of aging, the Associate Degree Program in Gerontology prepares students for employment in the field of direct services to the elderly. The curriculum is designed specifically to prepare a student in the skills, knowledge and orientation needed to effectively render services to the elderly. Sixty-five to sixty-seven (65-67) credit hours of work are required for graduation.

FIRST SEMESTER		CREDITS	SECOND SEMESTER		CREDITS
EN4401	English Composition I	3	EN4402	English Composition II	3
	Natural Science Elective	3/4		Social Science Elective	3
PS1154	Human Growth & Development	3	GR6557	Working With the Aged	3
GR6553	Concepts & Issues in Gerontology	3	GR6556	Law & Social Advocacy	3
GR6552	Retirement & Leisure Planning	3	GR6561	Gerontology Practicum I*	4
			PE2293	Innovative Movement Experiences: Childhood to Adult	2
		15/16			
					18
THIRD SEMESTER		CREDITS	FOURTH SEMESTER		CREDITS
	Mathematics Requirement	3		Natural Science Elective	3/4
	Humanities Elective	3		Humanities Elective	3
GR6554	Aging: Services & Resources	3	GR6555	Economic Problems of Aging	3
GR6562	Gerontology Practicum II*	4	GR6563	Gerontology Practicum III*	4
	Elective	3		Elective	3
		16			16/17

\* In some instances, the program coordinator may recommend that a suitable course be substituted for up to two of the practicums for persons who have had significant, demonstrable experience working with elders. Practicum courses will be limited to students enrolled in the Gerontology Program.

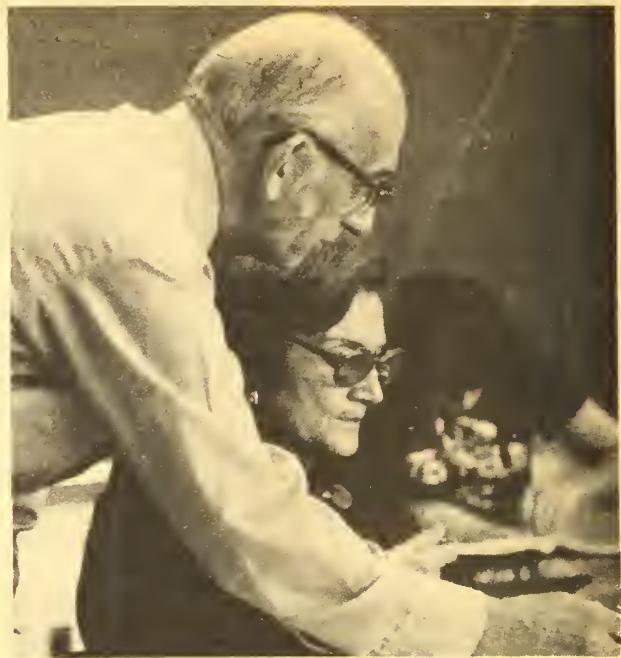
NOTE: Students planning to transfer to colleges offering a baccalaureate degree are advised to consult the course requirements of the colleges in which they are interested when selecting electives. Students completing this program will be eligible for transfer under the provisions of the Commonwealth Transfer Compact.

## Certificate in Gerontology

The One-year Certificate Program in Gerontology is a means of emphasizing Gerontology within related professions and paraprofessions by upgrading the expertise of individuals working directly with the elderly or in programs on aging. The program is designed to meet the needs of a wide range of students working in a broad spectrum of settings, and coming to the college with widely divergent backgrounds. Thirty-two (32) credit hours of work are required for certification.

FIRST SEMESTER		CREDITS	SECOND SEMESTER		CREDITS
EN4401	English Composition I	3	EN4402	English Composition II	3
GR6553	Concepts & Issues in Gerontology	3	GR6556	Law & Social Advocacy	3
GR6552	Retirement & Leisure Planning	3	GR6554	Aging: Services & Resources	3
GR6557	Working With the Aged	3	GR6555	Economic Problems of Aging	3
GR6561	Gerontology Practicum I*	4	GR6562	Gerontology Practicum II*	4
					16

\* In some instances, the program coordinator may recommend that a suitable course be substituted for one or both of the practicums for persons who have had significant, demonstrable experience working with elders. Practicum courses will be limited to students enrolled in the Gerontology Program.



## Associate Degree in Gerontology with option in Nursing Home Administration

The Nursing Home Administration Associate Degree Program (an Option to the Gerontology Program) provides general training in long term care and in the varied phases of Nursing Home Administration. The development of a comprehensive view of health care and an understanding of the role of the nursing home in society is emphasized. It is designed for health care personnel at supervisory and middle management levels as well as for those who have an interest in administrative careers. The program seeks to strengthen education for this administrative speciality from entry level through continuing education and to improve both its recognition and status. It prepares administrators and nursing home personnel to assume their enlarged responsibilities and roles in the health and social service delivery systems. Sixty-five to sixty-seven (65/67) credit hours of work are required for graduation.

FIRST SEMESTER	CREDITS	SECOND SEMESTER	CREDITS
EN4401 English Composition I	3	EN4402 English Composition II	3
Natural Science Elective	3/4	Social Science Elective	3
PS1154 Human Growth & Development	3	GR6557 Working With the Aged	3
GR6653 Concepts & Issues in Gerontology	3	GR6556 Law & Social Advocacy	3
GR6552 Retirement & Leisure Planning	3	GR6561 Gerontology Practicum I*	4
	15/16	PE2293 Innovative Movement Experience: Childhood to Adult	2
			18

THIRD SEMESTER	CREDITS	FOURTH SEMESTER	CREDITS
Mathematics Requirement	3	Natural Science Elective	3/4
Humanities Elective	3	Humanities Elective	3
GR6554 Aging: Services & Resources	3	GR6555 Economic Problems of Aging	3
GR6562 Nursing Home Administration I	4	NH6614 Nursing Home Administration II	3
NH6613 Gerontology Practicum II**	3	NH6670 Practicum in Nursing Home Administration	4
	16		16/17

\* In some instances, the program coordinator may recommend that a suitable course be substituted for one or both of the practicum for persons who have had significant, demonstrable experience working with elders.

NOTE: On and after January 1, 1978, in order to qualify for the Nursing Home Administrator examination in Massachusetts, the candidate must have a bachelor degree and meet internship requirements as set forth in the Board rules and regulations. These should be examined to determine the experience requirement applicable in individual situations.

NOTE: Students planning to transfer to colleges offering a baccalaureate degree are advised to consult the course requirements of the colleges they are interested in when selecting electives. Students should also review the Commonwealth Transfer Pact.

## Associate Degree in Deafness Communication

The Deafness Communication Associate Degree Program is designed to provide the students with an opportunity to develop an understanding of the problems of people who are deaf. The program provides specialized training in the modalities of communication and interpretory techniques to assist in alleviating the problems of people who are deaf. The program also provides for career exploration and transfer to bachelor degree programs. Classroom work and experiential learning opportunities are coordinated to develop progressively refined skills toward the goal of certified interpreter for deaf people. Graduates are prepared to sit for the certification evaluations conducted by the National Registry of Interpreters of the Deaf. Sixty to sixty-two (60/62) credit hours of work are required for graduation.

FIRST SEMESTER		CREDITS	SECOND SEMESTER		CREDITS
EN4401	English Composition I	3	EN4402	English Composition II	3
PS1202	Human Growth & Development	3	DC1004	Deafness: Intermediate Manual Communication	3
DC1001	Orientation to Deafness	3	DC1006	Deafness: Introductory Ameslan	3
DC1002	Deafness: Basic Manual Communications	3	SO3321	Introduction to Sociology	3
	Elective*	3		Mathematics Elective***	3
		15			15
THIRD SEMESTER		CREDITS	FOURTH SEMESTER		CREDITS
DC1008	Deafness: Advanced Ameslan	3	DC1012	Deafness: Advanced Interpreting for Deaf People	3
DC1010	Deafness: Introductory Interpreting for Deaf People	3		Natural Science Requirement**	14
	Natural Science Requirement**	3/4		Elective*	3
	Elective*	3		Elective*	3
	Elective*	3		Elective*	3
		15/16			15/16

\* Students MUST choose at least three [3] humanities electives and one social or behavioral science elective, if all required courses are completed. In addition to this distribution of courses, the individual completing the degree will be eligible for consideration at four-year schools under the guidelines of the Commonwealth Transfer Compact. Persons who wish to transfer to other colleges should elect courses which satisfy the requirements of those colleges as well as the Commonwealth Transfer Compact.

\*\* Students may choose any laboratory or non-laboratory natural science course.

\*\*\* Students may choose any math course except MA5511 Fundamentals of Mathematics.

NOTE: The deafness courses must be taught in sequence as skills are developmental. In order to provide the certificate program in one academic year, two semesters, all the deafness courses will be taught for six hours a week, for seven and one half weeks. Therefore, a student will be involved in no more than two deafness courses at any time, and the special skills and knowledge will be developed sequentially. This intensification provides a more effective, productive and efficient use of time and staff.

## Certificate in Deafness Communication

The Certificate Program in Deafness Communications is designed to provide students with an opportunity to develop an understanding of the problems of people who are deaf. The program provides specialized training in the modalities of communication and interpretory techniques to assist in alleviating the problems of people who are deaf. Classroom work and experiential learning opportunities are coordinated to develop progressively refined skills toward the goal of certified interpreter for deaf people. Graduates are prepared to sit for the certification evaluation conducted by the National Registry of Interpreters of the Deaf. Credits earned in the certificate program may be applied toward associate degree requirements in Deafness Communication. Thirty (30) credit hours of work are required for the certificate.

FIRST SEMESTER		CREDITS	SECOND SEMESTER		CREDITS
EN4401	English Composition I	3	EN4402	English Composition II	3
PS1202	Human Growth and Development	3	DC1006	Deafness: Introductory Ameslan	3
DC1002	Deafness: Basic Manual Communication	3	DC1008	Deafness: Advanced Ameslan	3
DC1001	Orientation to Deafness	3	DC1010	Deafness: Introductory Interpreting for Deaf People	3
DC1004	Deafness: Intermediate Manual Communication	3	DC1112	Deafness: Advanced Interpreting for Deaf People	3
		15			15

NOTE: The deafness courses must be taught in sequence as skills are developmental. In order to provide the certificate program in one academic year, two semesters, all the deafness courses will be taught for six hours a week, for seven and one half weeks. Therefore, a student will be involved in no more than two deafness courses at any time, and the special skills and knowledge will be developed sequentially. This intensification provides a more effective, productive and efficient use of time and staff.

## Associate Degree in Library Associate

The Library Associate Program is designed to provide para-professional training and education for individuals who aspire to a career in the library field. This program offers practical and technical instruction for in-service personnel who seek to upgrade their career status, and for pre-service individuals seeking career opportunities. This curriculum is designed principally as a career program. However, opportunities are available in closely related fields of study for students wishing to transfer to an upper level college or university in pursuit of a baccalaureate degree. This program requires sixty-one to sixty-three (61/63) credit hours of work for graduation.

FIRST SEMESTER		CREDITS	SECOND SEMESTER		CREDITS
EN4401	English Composition I	3	EN4402	English Composition II	3
LS0121	Introduction to Library Services	3	LS0141	Library Technical Services	3
TW6621	Typewriting I	3	LS0131	Audio-Visual Media Workshop	3/4
	Humanities Elective	3		Natural Science Elective	3
	Social Science Elective	3		Social Science Elective	3
				Math Elective	
		15			
					16/17
THIRD SEMESTER		CREDITS	FOURTH SEMESTER		CREDITS
EN8011	Speech	3	CT6631	Introduction to Data Processing	3
LS0130	Creative Use and Production of Audio/Visual Media	3	LS0132	Children's Literature for Elementary and Public Librarians	3
	Natural Science Elective	3/4	LS0135	Field Practicum II *	3
	Humanities Elective	3	LS0150	Senior Seminar *	3
LS0134	Field Practicum I *	3		Social Science Elective	
		15/16			
					15

\* The Program Coordinator reserves the right to recommend the waiving of the requirement of completion of one or both Practicum courses for those persons with demonstrable experience in the field. In such instances a course approved by the Program Coordinator may be substituted.

Persons completing this program will meet the transfer requirements of the Commonwealth Transfer Compact.

## Certificate in Library Assistant

The Library Assistant Program is geared to provide practical and technical instruction for both pre- and in-service persons. Students who successfully complete the Library Assistant Certificate curriculum will be qualified to pursue an Associate in Science Degree awarded through the Library Associate Program or a closely related field of study. Like the Library Associate Program, the Library Assistant Program is designed principally as a career curriculum. This program requires 31 credits for graduation.

FIRST SEMESTER		CREDITS	SECOND SEMESTER		CREDITS
EN4401	English Composition I	3	EN4402	English Composition II	3
LS0121	Introduction to Library Services	3	LS0130	Creative Use and Production of Audio-Visual Media	3
LS0141	Library Technical Services	3	CT6631	Introduction to Data Processing	3
TW6621	Typewriting I	3	LS0135	Practicum II *	3
LS0131	Audio-Visual Media Workshop	1	LS0132	Children's Literature for Elementary and Public Librarians	
LS0134	Practicum I	3			
		16			
					15

\* The Program Coordinator reserves the right to recommend the waiving of the requirement of completion of one or both Practicum courses for those persons with demonstrable experience in the field. In such instances a course approved by the Program Coordinator may be substituted.

## Associate Degree in Mental Health Technology

The Mental Health Technology Associate Degree Program instructs students in the theory and skills needed to recognize mental health problems in individuals, in groups and in the community; to understand the structure of mental health facilities, to understand current modalities of treatment in mental health; and to assist with physical rehabilitative therapies. Carefully supervised clinical experiences are part of the program and prepare students for middle-level professional positions in various types of mental health facilities. Sixty-three to sixty-four (63/64) credit hours of work are required for graduation.

FIRST SEMESTER		CREDITS	SECOND SEMESTER		CREDITS
EN4401	English Composition I	3	EN4402	English Composition II	3
PS1101	Introduction to Psychology	3		Elective	3
MH2111	Introduction to Mental Health	3		Natural Science Elective	3/4
BI5510	Human Biology	3	MH2155	Modalities of Treatment	3
	Elective	3	MH2134	Mental Health Practicum I	4
MH2133	Observation & Recording of Mental Health Programs	1			—
		16			16/17
THIRD SEMESTER		CREDITS	FOURTH SEMESTER		CREDITS
PS1751	Abnormal Psychology	3	MH2166	Seminar in Mental Health	3
MH2143	Mental Health Practicum II	4	MH2144	Mental Health Practicum III	4
PE2293	Innovative Movement Experiences	2	FA7012	Introduction to Creative Experience	3
PE2002	First Aid and Safety	3		Sociology Elective	3
MH2147	Group Dynamics	3		Elective	3
		15			16

**PROGRAM PREREQUISITE:** Letters of reference and a personal interview with the program coordinator are required after the initial admission process has been completed. Suggested electives for the Commonwealth Transfer Compact are three mathematics credits and six credits in humanities/fine arts. All courses with an "MH" prefix are restricted to students enrolled in the Mental Health Technology or House Manager Programs.

## Certificate in House Manager

Students in the one-year House Manager Certificate Program will learn the theory and develop the skills needed to provide direct client services by assisting residents to master activity of daily living skills; group and individual counseling; money management techniques for residents; community referral skills; and to develop an understanding of the problems of the mentally retarded and mentally ill as they seek to enter into the mainstream of our society after years of institutionalization. Carefully supervised clinical experiences in residential services are an integral part of the program and prepare students for positions as a house manager. Graduates of this program option have the opportunity to continue working toward an associate's degree in Mental Health Technology. Thirty-three (33) credit hours of work are required to complete the certificate requirements.

FIRST SEMESTER		CREDITS	SECOND SEMESTER		CREDITS
EN4401	English Composition I	3	EN4402	English Composition II	3
MH2111	Introduction to Mental Health	3	PS1101	Introduction to Psychology	3
MH2001	Management of Community Residence: Health, Safety, Nutrition	3	MH2256	Behavior Management Techniques	3
MH2133	Observation and Recording of Mental Health Programs	1	MA5613	Mathematics of Finance	3
MH2147	Group Dynamics	3	MH2146	Mental Health Practicum in Residential Services II	4
MH2145	Mental Health Practicum in Residential Services I	4			—
		17			16

**NOTE:** All courses with an "MH" prefix are restricted to students enrolled in the Mental Health Technology or House Manager Programs.

## Department of Sport and Leisure Studies

Students today are seeking a more relevant and meaningful educational experience. Their life styles are geared toward a leisure ethic and a fuller more enjoyable quality of life.

The Department of Sport and Leisure Studies at Northern Essex has accepted this challenge to offer a more realistic and exciting program to meet the needs of a modern day society. We service a broad segment of the student body and believe we are more flexible, more imaginative, and more interdisciplinary in nature than most other college programs in physical education. We believe the team sport approach should not be the focal point for the community college physical education service program. We emphasize life time sports, aerobic fitness and leisure time activities with a back to nature appeal.

Offerings in individual and dual carry-over sports such as jogging, tennis, karate, racketball, archery and platform tennis are balanced with outdoor adventure activities such as rock climbing, canoeing, cycling, fly fishing, sailing and cross country skiing.

The programs and courses offered by the Department of Sport and Leisure Studies will contribute to the development of physical recreation skills and interests, that will enrich an individual's leisure and stimulate a desire for life-long fitness, health and enjoyment. Credits earned in Leisure Studies may be applied where appropriate, to degree requirements, and they are fully transferable under the Commonwealth Transfer Compact.

The following academic policies on Sport and Leisure Studies courses are in effect at Northern Essex:

1. There is no Sport and Leisure requirement unless specified.
2. All Sport and Leisure courses are elective.
3. Sport and Leisure courses receive a letter grade.
4. Sport and Leisure credits are computed in the quality point average.
5. All Sport and Leisure courses are co-educational.
6. Most Sport and Leisure Courses carry one academic credit for eight weeks of classes.

### DEPARTMENT OF SPORT AND LEISURE STUDIES COURSES AVAILABLE

Archery	Slimnastics *		
Badminton	Tennis	Sailing	
Fencing	Jogging	Weight Lifting	
Golf	Backpacking	Racquetball	
Yoga	Physical Conditioning	Rockclimbing	Contemporary Health Issues **
Ballet	Fencing	Saltwater Fishing	
Folk/Square Dancing	Bowling	Orienteering	Introduction to Outdoor Education
Karate	Canoeing	Winter Mountaineering	Innovative Movement Experience
Modern Dance	Swimming	Senior Life Saving *	Introduction to Physical Education **
Self-Defense	Cycling	Outdoor Survival	
Ethnic Dance	Fly Fishing *	Mountaineering	Self Awareness *
Judo	Scuba Diving	Cross Country Skiing	Camp Counseling and
Trampoline	Water Safety	Fundamentals of Movement	Environment Interpretation **

\* 2 Credit

\*\* 3 Credit



## ***Division of Instructional Development***

**OFFERING SUPPORTIVE ACADEMIC  
and  
EDUCATIONAL RESOURCES AND PROGRAMS**

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### **LEARNING RESOURCE CENTER**

*Library Services*

*Media Services*

*Audio/Visual*

*Television*

### **ACADEMIC SUPPORT CENTER**

*Discovery Program*

*English as a Second Language*

*Writing Center*

*Mathematics Center*

*Reading Center*

*Skills Diagnostic Center*



## Learning Resource Center

The Learning Resources Center at Northern Essex Community College is the backbone of our institution through its provision of supportive educational resources and programs, print and non-print (books, records, films, filmstrips, magazines, newspapers, etc.). It acts as a catalyst in the learning process through its selection, development, construction, instruction, organization, and evaluation of simple and complex learning materials. And it acts as a community agent through its open access policy whereby the services and facilities of the LRC are available to all residents of the Merrimack Valley.

The LRC has a collection of books totaling more than 43,000 volumes, and subscriptions to 200 magazines and newspapers of scholarly and general reading interest, as well as a collection of audiovisual materials, such as microfilm, films, filmstrips, records, audio tapes, cassettes, video tapes, and video cassettes, slides, transparencies, etc., and the equipment needed for the utilization of these materials by students and faculty.

Individualized and programmed instruction is available through the Dial Access system in the LRC Learning Lab in the Classroom Building, where audiotape duplication, tape recording, and listening stations are provided for individual student use and classroom instruction.

A campus-wide closed circuit TV system is available, which provides for the production and distribution of off air, live, and pre-recorded videotape programs as well as for the reception of off air broadcasts from commercial and educational TV stations. Thus, the LRC provides for individualized instruction in highly specialized areas, large group instruction, and the viewing of conferences and seminars.

Specialized educational and instructional resources and programs are available to students with visual handicaps and/or learning disabilities. The LRC is one of 53 regional centers for talking books, magazines, and braille materials for the use of blind students as well as the visually impaired and blind and dyslexic citizens from surrounding communities.

Students and faculty are able to use other state college and university libraries, as well as local area libraries. Also, additional educational resources are available for student use through the library's involvement in consortia such as the Northeast Consortium, Community Colleges of the Air Consortium, and the Greater Haverhill Libraries Consortium.

Professionally trained staff are on duty in the evening to assist Continuing Education students. Students registered in the Division of Continuing Education and Community Services, whether enrolled in credit or special interest courses, have full privileges for services and resources - reference assistance, inter library loan, assistance in research, etc. Class orientations are given in the use of the LRC and the staff is more than willing to give individualized help to any student who has a need to learn how to use a library. Our primary concern and aim is to help the individual.

The LRC hours are listed below and, if a student has any questions or needs help in any way, we sincerely hope that you will come in and discuss it with us - and remember, all the services and facilities of the LRC are available to you.

Present your student identification card to obtain a library card at the Information/Circulation area. Pick one up and use it often! When classes are in session, the LRC hours are Monday through Thursday, 8:00 AM to 9:30 PM; Friday 8:00 AM to 5:00 PM and Saturday 8:00 AM to 12 Noon. During intersessions, the LRC hours are Monday through Friday from 8:00 AM to 5:00 PM.

## **Academic Support Center**

The Academic Support Center was created to meet the needs of individuals who desire a post secondary education but who may not be fully prepared to achieve this goal. Students find themselves in this situation for a number of reasons: 1) academic unpreparedness and the need for skills improvement; 2) uncertainty with regard to ones abilities, direction, career or vocational goals; 3) an unrewarding high school experience; 4) lack of a high school diploma; 5) unfamiliarity with the demands of an educational environment.

The Support Center has a threefold purpose: a) to assist students in acquiring the skills to be successful at Northern Essex; b) to support the Division and Department of the college in their delivery of educational services and c) to provide access to the college to those who may otherwise be deprived of such an advantage.

Located on the second floor of the Classroom Building, the Center offers this assistance in many ways: through participation in developmental programs (Discovery and ESL Programs); through participation in one or more courses in the writing, mathematics or reading centers; by taking advantage of the Skills Diagnostic Center which is responsible for student assessment, diagnosis and referral, general educational development (GED) course delivery and tutorial assistance; and/or by participation in the many workshops designed to increase self-awareness and self-reliance.

## **Writing Center**

The Writing Center provides services to students who wish to improve their ability to write effectively. All students seeking assistance receive individual attention which includes a diagnosis of writing problems and development of a personal (and intensive) program to overcome these problems. Students work at their own rate with support from the Writing Center staff and receive ongoing evaluation plus a formal recommendation at the end of the semester. These services are provided in two ways: through a three-credit course, Introduction to College English, which is designed to prepare students lacking basic writing skills for Composition I (a required English Course); and through non-credit writing assistance for any student who drops in or is referred by an instructor. Other options are also available. For more information call the Writing Center at extension 253.

## **Mathematics Center**

The Math Center provides services to students ranging from basic arithmetic to advanced topics in Calculus. It does this in two ways: a) through tutorial services for students who drop in or are referred by an instructor and b) through credit courses, i.e., Developmental Math, Basic Algebra and Basic Geometry, designed to deliver skills in these areas. All students are initially tested to determine strengths and weaknesses and an individualized study program is developed, taking into account the student's needs and goals. Math Center personnel are especially sensitive to individual needs. Students receive constant personal attention as they work through material, even such problems as test taking, anxiety and math-a-phobia are addressed. The Center is also open to individuals from the community. For more information contact the Math Lab at extension 225.

## **Reading Center**

The purpose of the Reading Center is to assist individuals in developing effective reading and study skills. To accomplish this, all students coming to the Center receive an assessment of their strengths and weaknesses. An individualized program of study is then developed. Often, this individualized study plan is incorporated within one of the three credit course options offered by the Center to compliment and supplement this work. Each student receives ongoing personal attention from the Reading Center staff while having the opportunity to interact with fellow students. Assistance on a drop-in or referral basis is also provided for students with specific requests. For more information, contact the Reading Center at extension 253.



## **E.S.L. Program**

The Intensive English as a Second Language (ESL) Program is a special, non-degree developmental opportunity for foreign-born area residents to increase their proficiency in English rapidly through concentrated study. Four one-semester, three credit intensive courses in English as a Second Language are offered at graduated proficiency levels. Each course includes seven class hours per week and an optional seven laboratory hours of individualized instruction in the ESL laboratory. Courses involve listening, speaking, reading and writing in English, and understanding American culture. The introductory and intermediate level courses emphasize sentence structure and basic conversation skills. The advanced level courses emphasize reading comprehension, paragraph writing and vocabulary in specific subject areas. Instruction is flexible, based on students' interests and abilities, with emphasis on small group interaction and sharing of personal cross-cultural experiences.

All four courses are offered in both the Day Division and Division of Continuing Education & Community Services. Students in the Day Division program may enroll in either one or two ESL courses per semester. Students in the Division of Continuing Education & Community Services program may enroll in one ESL course per semester, for credit or on a non-credit basis. Intermediate and advanced students audit additional college courses as part of their ESL program. Some advanced level students may take additional college courses for credit. After completing the ESL program, students may apply for transfer to degree programs at the college.

Special academic and personal counseling is available to all ESL students. Preparation for high school equivalency tests in Spanish or English is available for students in the program who have not finished high school. Certificates are granted for satisfactory completion of each ESL course.

**NOTE: Credit for Life Experience is not offered by the college for any of the ESL courses. ESL courses are Liberal Arts electives and do not replace English Composition I and II requirements in other programs.**

## **Counseling**

Academic Support Center Personnel understand that skills development is not an easy task nor can it be accomplished in a vacuum. Every effort is made to meet individual student need, intellectual and emotional, throughout the learning process and to make learning as relevant as possible.

For that reason, a full-time counselor is available, supported by the college's counseling center, to assist students in discovering and developing their personal and academic strengths. Complimenting the academic offerings are a host of seminars and mini-workshops in career exploration and planning, life coping skills, values clarification and personal counseling support.

## **Discovery Program**

The Discovery Program is a one-semester-long, college-level course of studies, special workshops and unique activities. It is particularly designed for students who need individual assistance and support as they begin their college education. Course work is tailored to meet individual needs and students can set their own pace, working as full or part-time students. All courses successfully completed in the Discovery Program are transferable to other programs offered by the college.



***DIVISION of MATHEMATICS,  
SCIENCE & TECHNOLOGY***

**ENGINEERING SCIENCE**

**CIVIL TECHNOLOGY**

**COMPUTER TECHNOLOGY**

**ELECTRONIC TECHNOLOGY**

**ENVIRONMENTAL TECHNOLOGY**

## **Associate Degree in Engineering Science**

The Engineering Science Associate Degree Program is designed to prepare an engineering student for transfer to a four-year college or university. A core curriculum has been developed in cooperation with the American Association for Engineering Education and engineering divisions of several four-year institutions. The core curriculum allows the student an opportunity to explore various engineering fields equipping him to choose the field of specialization best suited to his interests and abilities. The fields of engineering include chemical, industrial, electrical, civil, and mechanical. A strong background in mathematics is required. Sixty-eight (68) credit hours of work are required for graduation.

<b>FIRST SEMESTER</b>		<b>CREDITS</b>	<b>SECOND SEMESTER</b>		<b>CREDITS</b>
EN4401	English Composition I	3	EN4402	English Composition II	3
MA5661	Advanced Trigonometry & Analytic Geometry	4	MA5683	Calculus I	4
	Elective *	3/4	PI5623	Engineering Physics I	4
ET6601	Graphics	2		Elective *	3
	Communication Elective	3		Elective *	3
		15/16			17
<b>THIRD SEMESTER</b>		<b>CREDITS</b>	<b>FOURTH SEMESTER</b>		<b>CREDITS</b>
MA5684	Calculus II	4		Technical Elective **	4
PI5624	Engineering Physics II	4		Technical Elective **	3/4
ET6651	Engineering Mechanics I	3	PI5651	Engineering Physics III	4
	Technical Elective **	4		Technical Elective **	4
	Elective *	3		Elective *	3
		18			18/19

\* **STATEMENT ON ELECTIVES:** A minimum of nine semester hours of electives must be taken in humanities or the social sciences. During the first semester the student should contact the college to which he plans to transfer, and then select both technical and general electives to fulfill his transfer goals. Proposed technical electives from outside the lists below will be considered, but must be approved by the Chairman, Department of Engineering Science.

\*\* **FOLLOWING IS A LIST OF SUGGESTED TECHNICAL ELECTIVES FOR VARIOUS ENGINEERING BRANCHES. THE LIST IS NOT TO BE CONSIDERED COMPLETE:**

**CIVIL ENGINEERING:** Economics I and II; Surveying I and II; Differential Equations; Scientific Programming; Chemistry I and II; Strength of Materials

**ELECTRONIC/ELECTRICAL ENGINEERING:** Economics I and II; Differential Equations; Scientific Programming; Strength of Materials; Circuit Analysis I and II; Networks I and II; Engineering Mechanics II

**MECHANICAL ENGINEERING:** Economics I and II; Engineering Mechanics II; Differential Equations; Scientific Programming; Analysis I and II; Networks I and II; Chemistry I and II; Strength of Materials

**ENVIRONMENTAL ENGINEERING:** Economics I and II; Scientific Programming; Introductory Biology; Microbiology; Chemistry I and II

**CHEMICAL ENGINEERING:** Introductory Chemistry I and II; General Chemistry I and II; Special Topics in Chemistry; Economics I and II; Scientific Programming

**PROGRAM PREREQUISITES:** Two years of algebra, geometry, trigonometry, one year of physics or chemistry

## Associate Degree in Civil Technology

The Civil Technology Associate Degree Program provides students with theoretical and practical knowledge and experience which trains them as qualified technicians in the surveying, layout, plans and specifications, design and supervisory areas of the growing construction field. Broad construction site experiences are part of the curriculum. The theory presented also prepares students interested in education beyond the associate degree level. Sixty-seven (67) credit hours of work are required for graduation.

FIRST SEMESTER		CREDITS	SECOND SEMESTER		CREDITS
EN4401	English Composition I	3	EN4402	English Composition II	3
MA5621	Algebra & Trigonometry	4	MA5622	Advanced Algebra & Trigonometry	4
ET6601	Graphics	2	CE6602	Surveying II	4
CE6601	Surveying I	4	CE6612	Drawing for Civil Technology	1
Elective *		3	CT6682	Computer Applications for Science and Technology	4
		16			16

THIRD SEMESTER		CREDITS	FOURTH SEMESTER		CREDITS
MA5651	Advanced Technical Math I	4	CE6603	Advanced Surveying	4
CE6665	Transportation Engineering	3	CE6672	Soil Mechanics	4
CE6653	Strength of Materials	4	PI5622	Applied Physics II	4
CE6671	Sanitary Engineering	3	CE6654	Structural Analysis & Design	3
CE6651	Mechanics for Civil Technology	3	Elective *		3
		17			18

\* Electives must be selected from courses offered in social sciences or the humanities

**PROGRAM PREREQUISITE:** Two years of algebra; geometry and trigonometry helpful, but not required.

## Associate Degree in Computer Technology

The Computer Technology Program trains students in the skills necessary for employment in data processing. Our graduates have entered varied areas of computer technology including system analysis training programs, programming, and data processing management. The curriculum is based almost entirely on developing various interdependent skill techniques which are based on a strong background in mathematics, accounting and communications. The course includes field trips to computer installations. The college's computer facilities are used extensively for work shops. There is good transfer potential in the program, and students planning to continue their education beyond the associate degree level should select electives to fulfill the requirements for transfer of the four-year institution they plan to attend. Sixty-eight (68) credit hours of work are required for graduation.

FIRST SEMESTER		CREDITS	SECOND SEMESTER		CREDITS
EN4401	English Composition I	3	EN4402	English Composition II	3
MA5611	Finite Math Models I	3	MA5612	Finite Math Models II	3
AC6601	Introductory Accounting I	4	AC6602	Introductory Accounting II	4
CT6601	Fundamentals of Digital Logic	3	Communications Elective		3
CT6611	Business Programming (RPG)	4	CT6622	Scientific Programming	4
		17			17

THIRD SEMESTER		CREDITS	FOURTH SEMESTER		CREDITS
MA5333	Introduction to Statistics	3	Elective		3
Elective		3	CT6652	Business Programming (COBOL)	4
Elective		3	CT6676	Systems Development & Design	4
CT6651	Assembly Programming	4	CT6653	Advanced Programming	4
Elective (Liberal Arts)		3	Elective (Liberal Arts)		3
		16			18

**PROGRAM PREREQUISITE:** Two years of algebra

## Associate Degree in Electronic Technology

The Electronic Technology Associate Degree Program is designed primarily to equip students for employment (often as an engineering assistant) with immediately marketable skills in electronic technology. This curriculum concentrates on developing complex, interdependent electronic techniques. Heavy emphasis is put on use of state-of-the-art devices and laboratory equipment and the preparing of complete, analytical laboratory reports. A film program and field trips are included in the program. Recently, Bachelor of Arts in Technology programs have been developed nation-wide and the student who plans to continue his education at a four-year institution should consider these new programs. Sixty-five or sixty-six (65/66) credit hours of work are required for graduation.

FIRST SEMESTER		CREDITS	SECOND SEMESTER		CREDITS
EN4401	English Composition I	3	EN4402	English Composition II	3
MA5611	Algebra & Trigonometry	4	MA5622	Advanced Algebra & Trigonometry	4
ET6611	Circuit Analysis I	4	ET6612	Circuit Analysis II	4
ET6613	Introduction to Electronics	1	ET6672	Electronics I	5
CT6601	Fundamentals of Digital Logic	3			
ET6603	Digital Electronics Lab	1			
					16
		16			
THIRD SEMESTER		CREDITS	FOURTH SEMESTER		CREDITS
ET6673	Electronics II	5	ET6684	Electronic Systems	4
	Liberal Arts Elective	3		Liberal Arts Elective	3
	Technical Elective *	4		Technical Elective **	4
	Technical Elective *	4		Technical Elective **	4/3
				Elective	3
		16			
					17/18

\* THIRD SEMESTER TECHNICAL ELECTIVES: ET6682 Digital Electronics, CT6651 Assembly Language Programming, MA5651 Advanced Technical Math I, ET6653 Circuit Analysis III, PI5621 Applied Physics I

\*\* FOURTH SEMESTER TECHNICAL ELECTIVES: ET6690 Microcomputers & Peripherals, MA5652 Advanced Technical Math II, MA5683 Calculus I, PI5622 Applied Physics II, CT6635, CT6636, CT6637 Basic Programming I, II, III, CT6622 Scientific Programming, CT6682 Computer Application in Engineering & Technology

**PROGRAM PREREQUISITES:** Two years of algebra

## Associate Degree in Environmental Technology

The Environmental Technology Associate Degree Program aims at developing technologists capable of working in any of the major pollution areas: air, water and solid waste disposal. The program is designed to provide a broad-based foundation in the chemical and biological sciences as they apply to the problems involved with processing waste and recycling its by-products. This foundation will be supplemented by courses keyed to specific engineering applications. Seventy (70) credit hours of work are required for graduation.

FIRST SEMESTER		CREDITS	SECOND SEMESTER		CREDITS
EN4401	English Composition I	3	EN4402	English Composition II	3
MA5621	Algebra & Trigonometry	4	MA5622	Advanced Algebra & Trigonometry	4
EV5621	Environmental Sanitation	4	EV5627	Environmental Biology I	4
ET6601	Graphics	2	EV5630	Atmosphere Sampling & Analysis	4
CH5503	Introductory Chemistry I	4	EV5635	Land Usage	3
		17			18
THIRD SEMESTER		CREDITS	FOURTH SEMESTER		CREDITS
EV5637	Environmental Biology II	4	EV5626	Sanitary Chemistry II	4
EV5625	Sanitary Chemistry I	4	EV5640	Solid Waste Management	4
EV5624	Air Resources Management	3	EV5632	Codes, Specifications & Contracts	3
	Technical Elective *	4	EN4676	Technical Writing	3
EN8011	Speech	3		Non-technical Elective	3
		18			17

\* SUGGESTED TECHNICAL ELECTIVES: Sanitary Engineering, Scientific Programming, Physical Science I, Surveying I

**PROGRAM PREREQUISITES:** Two years of algebra; Biology and Chemistry helpful, but not required

# choosing your courses. . .

## Curriculum Design

The plan for each degree program offered at Northern Essex names certain courses which are specifically required in the program. The plan usually specifies other areas of study from which a specified number of courses must be selected by the student - these courses are designated as business electives, liberal arts electives, social science electives, etc. In certain programs, an opportunity is provided for the student to select a specified number of courses without restriction - free electives. Each curriculum plan states the total number of credit hours which must be earned to attain a degree.

## Testing

All entering freshmen complete a battery of tests to determine their strengths and weaknesses in English composition and mathematics. Recommendations are made to these students concerning the English and mathematics courses which would most benefit them after the tests are evaluated.

## Required Courses

When a course is listed as a requirement for a degree in a given curriculum and a student wishes to obtain the degree without taking that course, the student may request a waiver from the Dean of Students.

The Dean of Students shall consult with the appropriate division and department chairpersons in formulating a decision. The Dean of Students may also refer such requests to the Board of Recourse and Review of the Student Academic Affairs Committee for an advisory opinion.

## Course Prerequisites

When a course is listed as a prerequisite for another course and a student wishes to register but has not fulfilled the prerequisite, a request for waiver of the prerequisite may be made, on a form provided by the Registrar, to the instructor of the course and the chairperson of the academic department which offers the course.

## Elective Courses

An elective is any course which is not required in a specific curriculum. Every program offered in the college includes electives. Students should elect courses which are relevant to their personal interests, to their program as a whole, to the requirements of colleges to which they may wish to transfer and to their development as individuals with broad

and varied cultural interests.

Assistance in choosing electives is available from the faculty and counseling staff. Students are urged to consult counselors or faculty to make certain their elective choices are acceptable to the particular program in which they are enrolled. Courses which will be offered as electives during a specific semester will be announced at registration for that semester.

## Special Topics Courses

In order to provide for unique, highly individualized courses of study for a single student or a relatively small number of students, each academic department in the college offers special topics courses designed to provide further study through directed readings, directed research projects, seminar or special class work in a specific topic in a discipline.

Special topics courses are approved on a one-semester basis. The special topics courses available in a specific semester are available in the Office of the Registrar.

## Commonwealth Transfer Compact

In addition to completion of an associate degree, the Commonwealth Transfer Compact requires a core distribution of general education courses in specific liberal arts categories. These courses are not always included in the specialized career programs at the college. Students interested in the Transfer Compact should determine to what extent completion of requirements for their anticipated associate degrees also meets the conditions of the Transfer Compact. Any unsatisfied requirements may be completed via electives.

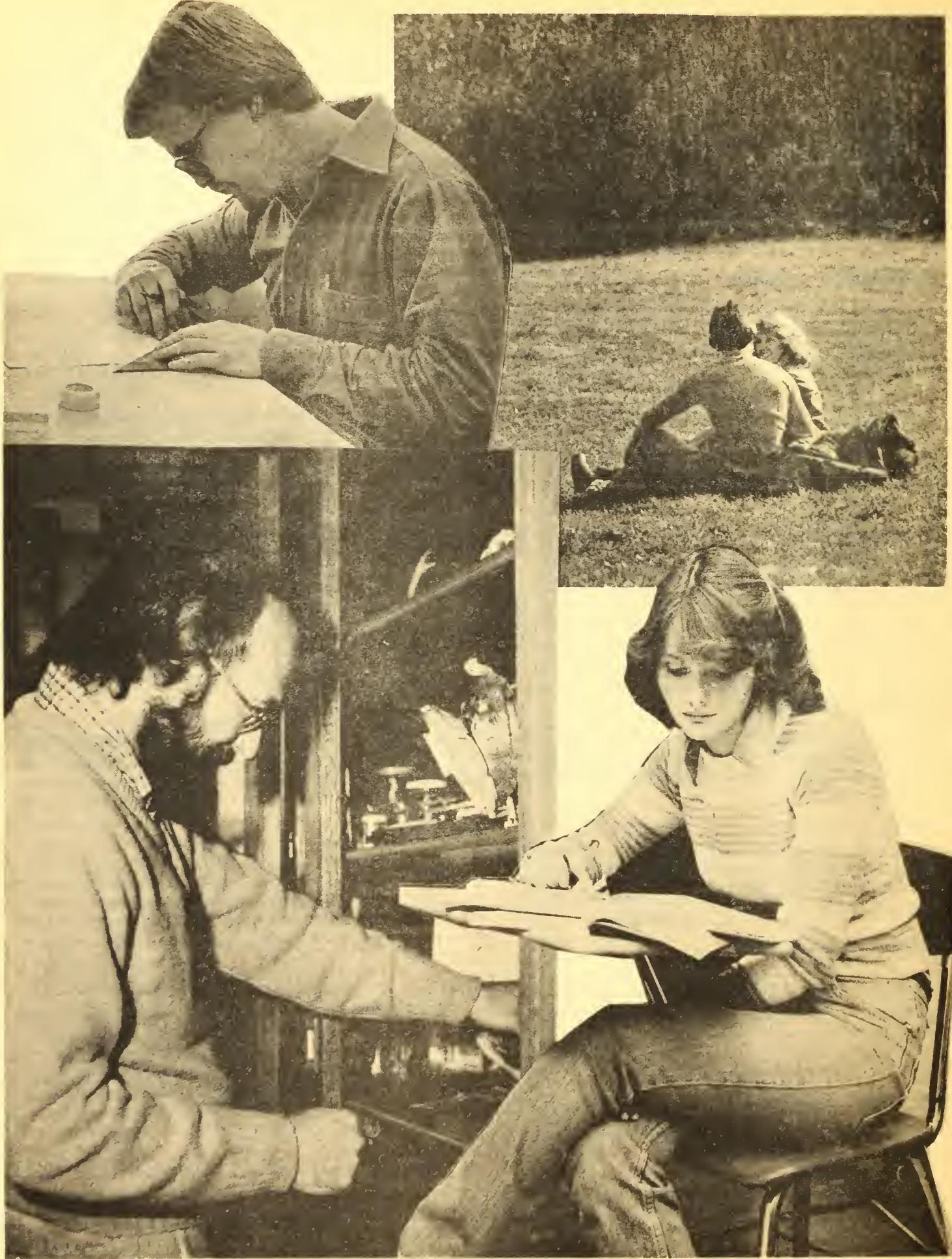
Northern Essex identifies courses included in a specific discipline by a two-letter course number prefix (cross-disciplinary courses are prefixed CD). The following list identifies the Northern Essex courses, by academic discipline, included in each Transfer Compact requirement category:

**BEHAVIORAL/SOCIAL SCIENCE:** Courses prefixed GV (government), HI (history), PS (psychology), SO (sociology) and cross-disciplinary courses CD0301 East Asian Culture and CD9575 History of Science and Technology

**ENGLISH/COMMUNICATIONS:** EN4401 English Composition I or EN4311 Communications I and EN4402 English Composition II

**HUMANITIES/FINE ARTS:** Courses prefixed FA (fine arts), MU (music), PH (philosophy), RE (religion), TH (theatre), FR (French), GM (German), SP (Spanish), all EN (English) courses except those listed in the English/Communications category above, CD0201 Bioethics and CD0301 East Asian Culture

**MATHEMATICS/SCIENCES:** Courses prefixed BI (biology), CH (chemistry), ES (earth science), MA (mathematics), PI (physics), SC (general science), CD9575 History of Science and Technology and CD0201 Bioethics.



## **Accounting**

### **AC6601 Introductory Accounting I**

A one-semester course; four credit hours. The basic concepts of accounting and uses of accounting data. Topics include the theory of debit and credit, use of journals and ledgers, analysis and recording of financial transactions, the accounting cycle, deferrals, accruals, inventories and fixed assets. Four class hours per week.

### **AC6602 Introductory Accounting II**

A one-semester course; four credit hours. A continuation of AC6601. Emphasis on accounting for the voucher system, payroll, partnerships, corporations, basic cost accounting and cost relationships, and special reports and statements. Four class hours per week.

**Prerequisite: AC6601**

### **AC6651 Intermediate Accounting I**

A one-semester course; four credit hours. A detailed study of accounting theory and practice as it relates to financial accounting. Includes income statement and balance sheet presentation, cash, temporary investments, short-term receivables, inventories and current liabilities. Four class hours per week.

**Prerequisite: AC6602**

### **AC6652 Intermediate Accounting II**

A one-semester course; four credit hours. A continuation of AC6651. Includes tangible assets, intangible assets, long-term liabilities, elements of corporate capital, investments, and the statement of changes in financial position. Four class hours per week.

**Prerequisite: AC6602**

### **AC6671 Cost Accounting**

A one-semester course; three credit hours. An intensive study of cost methods; costing for materials, labor and factory overhead; job-order process, direct costing and the use of standards. Three class hours per week.

**Prerequisite: AC6602**

### **AC6682 Tax Accounting**

A one-semester course; three credit hours. An introduction to the principles of federal taxation with emphasis on history of income taxation, gross income, deduction, exemptions, accounting records, preparation and filing of tax returns. Three class hours per week.

**Prerequisite: AC6602**

### **AC6691 Elements of Accounting I**

A one-semester course; three credit hours. Study of current accounting terminology. Introduction to the basic principles and practices of accounting. Topics include: double-entry system and the accounting equation, journals, ledgers, trial balances, work sheets, financial statements, cash and banking procedures and payroll records. Three class hours per week.

### **AC6692 Elements of Accounting II**

A one-semester course; three credit hours. Study of subsidiary ledgers, the voucher system, inventories, receivables and fixed assets. Introduction to accounting for partnerships and corporations. Opportunity for extensive practice through use of long problems and practice sets. Three class hours per week.

### **AC6693 Elements of Accounting III**

A one-semester course; three credit hours. Intensive study of the voucher system, corporate organization and accounting, manufacturing accounts, budgeting and internal reporting, interim statements, and analysis of financial statements. Three class hours per week.

**Prerequisite: AC6692 or equivalent**

### **AC6694 Simulation in Accounting**

A one-semester course; three credit hours. Students apply advanced accounting theory to the solution of comprehensive, detailed accounting problems representative of those encountered in contemporary business situations. Professional papers and relevant business cases are emphasized. Three class hours per week.

**Prerequisite: AC6693 or equivalent**

## **Biology**

### **BI5510 Human Biology**

A one-semester course; three credit hours. A basic study of the structure and function of the human body. Emphasis will be placed on the interrelationships between the systems. Special consideration will be given to the nervous system, the circulatory system, and reproduction, growth and development. Three class hours per week.

### **BI5511 Introductory Biology - Botany**

A one-semester course; four credit hours. An introductory biology course based on the study of plants. The lectures include a gross and microscopic survey of plant anatomy from algae to the higher vascular plants noting the evolutionary trends, their economic relationship with man, and the fundamentals of physiology and morphology of the higher vascular plants. Three class hours and two laboratory hours per week.

### **BI5514 Introductory Biology - Zoology**

A one-semester course; four credit hours. An introductory biology course based on the study of animals. The lectures include a survey of major invertebrate and vertebrate animals with emphasis on their structure, adaptions, evolution and natural history. Laboratory work emphasizes identification and structural form of local fauna. Three class hours and two laboratory hours per week.

### **BI5519 Anatomy and Physiology I**

A one-semester course; four credit hours. Human anatomical structures and physiological systems will be studied. Emphasis

will be placed on the interrelationships between the systems. Related topics such as physical abnormalities and diseases of the systems will be integrated where possible. Laboratory work will include experiments, dissection, microscope work and the study of charts and models. Three class hours and two laboratory hours per week.

### **BI5520 Anatomy and Physiology II**

A one-semester course; four credit hours. A continuation of BI5519 integrating genetics and embryology to provide a basic understanding of the principles of heredity and the processes of foetal growth and development. Three class hours and two laboratory hours per week.

### **BI5551 Genetics**

A one-semester course; four credit hours. The lectures present the fundamental Mendelian principles and the exploration of more recent discoveries, including DNA molecule and the operon theory of micro-organisms, higher plants and animals. New concepts of gene mutation and gene action are considered. Practical exercises are used to illustrate the principles. Three class hours and three laboratory hours per week.

**Prerequisite:** One year of introductory biology at the college level or permission of the instructor.

### **BI5553 Microbiology**

A one-semester course; four credit hours. The biology of bacteria and micro-organisms is studied. Laboratory work emphasizes the sterile technique. Immunology is discussed. Three class hours and three laboratory hours per week.

**Prerequisite:** One year of introductory biology at the college level and permission of the instructor.

### **BI0000 Special Topics in Biology**

A one-semester course; one to four credit hours. Directed readings, directed research, seminar or class in specific topics in discipline. The procedures to be followed and approval forms are available in the Registrar's office.

### **CD0261 Bioethics**

A one-semester course; three credit hours. An examination of the interrelationship between philosophy and problems arising from advances in modern biology, including the ethical implications of the problems of population control, resource allocation and biomedicine. This is a discussion course for those students who enjoy dealing with ideas. There are no prerequisites, but a general background in the sciences or philosophy may make the ideas presented in the course more meaningful. This course might not be transferable as a science requirement. Three class hours per week.

## **Banking**

### **BK6601 Principles of Bank Operations**

A one-semester course; three credit hours. Survey of banking's

relationship to the total economy and the functional relationships of departments within the bank. Develops the framework for more specialized study of the banking institution. Three class hours per week.

### **BK6602 Savings and Time Deposit Banking**

A one-semester course; three credit hours. A fundamental study of the historical development and economic function of savings institutions and the savings process. Three class hours per week.

### **BK6611 Money and Banking**

A one-semester course; three credit hours. The practical aspects of money and banking; emphasis is placed on such problems as economic stabilization, types of spending, the role of gold, limitations of central bank control, government fiscal policy, balance of payments and foreign exchange showing their repercussions on the banking industry in affecting yield curves and the structuring of portfolios. Three class hours per week.

### **BK6612 Bank Management**

A one-semester course; three credit hours. A study of trends in the philosophy and practice of management. Some use of case study. Three class hours per week.

### **BK6621 Credit Administration**

A one-semester course; three credit hours. This course concerns itself with a statement and a discussion of factors influencing and determining loan policy; methods of credit investigation and analysis, credit techniques, specific credit problems, and regular as well as unusual types of loans. Three class hours per week.

### **BK6622 Home Mortgage Lending**

A one-semester course; three credit hours. Examination of mortgage credit in the United States and the structure of the mortgage market. An analysis of the management considerations in mortgage lending and portfolio management. Three class hours per week.

### **BK6623 Installment Credit**

A one-semester course; three credit hours. Study of the installment credit function; credit information, lending, collections and other procedures as well as inventory financing, special loan programs, business development and advertising, and the public relations aspect of installment lending. Three class hours per week.

### **BK6624 Trust Department Services**

A one-semester course; three credit hours. Study of trust services, responsibilities of executors and administrators, analysis of the structure of trusts, alternative forms and the general and investment responsibilities of trustees. Three class hours per week.

### **BK6651 Analyzing Financial Statements**

A one-semester course; three credit hours. Basic considerations in financial statement analysis, basic financial ratios, analysis of working capital, and other items. Three class hours per week.

### **BK6652 Bank Letters and Reports**

A one-semester course; three credit hours. A review of the forms of letter and report writing as they apply to public relations and emphasize fundamental principles underlying modern correspondence. Three class hours per week.

### **BK6653 Bank Public Relations and Marketing**

A one-semester course; three credit hours. A study of the public relations and marketing aspects of banking as they apply to relations with customers, the community and others. Three class hours per week.

### **BK6654 Fundamentals of Bank Data Processing**

A one-semester course; three credit hours. A non-technical study of electronic data processing as applied to banks. A survey course. Three class hours per week.

## **Early Childhood Education**

### **CC2201 Introduction to Early Childhood Education**

A one-semester course; three credit hours. This course provides the student with an understanding of the child's experience in the school as it relates to his total development. It raises particular problems associated with curriculum planning and helps to develop criteria for evaluating a program for young children. Three class hours per week.

**Prerequisite: Enrollment in  
Early Childhood Education program**

### **CC2264 Early Childhood Education Seminar**

A one-semester course; three credit hours. Students are given the opportunity to summarize and analyze their understanding of the theories and practices in early childhood education and the role of the paraprofessional in this field. An informal lecture/discussion format allows for analysis of practicum experience as well as for community resource guest lecturers and independent research. Three class hours per week.

**Prerequisite: Enrollment in  
Early Childhood Education program**

### **CC2311 Observation and Recording of Child Behavior**

A one-semester course; one credit hour. A preliminary study of child behavior in varied institutional settings. Defined areas of child behavior will be observed and recorded. Three practicum hours per week, plus one hour for recording and preparation.

**Prerequisite: Enrollment in CC2201**

### **CC2312 Early Childhood Education Practicum I**

A one-semester course; three credit hours. Under the guidance and supervision of the cooperating teacher, skills and concepts of child growth, development and learning acquired in Introduction to Early Childhood Education and in Introduction to the Creative Experience will be applied by the student in selected practicum placements. One class hour and eight practicum hours per week, including preparation and conference time.

**Prerequisite: CC2201, FA7012**

### **CC2353 Early Childhood Education Practicum II**

A one-semester course; four credit hours. The student will be actively involved in the varied activities which constitute the curriculum of early childhood education classrooms and educational programs. Under the supervision of a cooperating teacher, the student will become more familiar with the role and responsibilities of the paraprofessional in early childhood education settings. One class hour and twelve practicum hours per week, including preparation and conference time.

**Prerequisite: CC2201, CC2312**

### **CC2354 Early Childhood Education Practicum III**

A one-semester course; five credit hours. Sixteen hours of actual experience in the early childhood classroom or educational program allows the student both greater involvement in the program and an increased familiarity with the role and responsibilities of the early childhood education paraprofessional. Twenty practicum hours per week, including preparation and conference time.

**Prerequisite: CC2312, CC2353**

### **ED0401 Teaching Reading in Early Childhood**

A one-semester course; three credit hours. Basic early childhood (pre-school through grade 3) reading skills and teaching techniques will be explored. Topics include children's literature, reading readiness, phonics and other word analysis skills, vocabulary, comprehension, the dyslexic youngster, diagnostic tools, area reading programs and current issues. This course is directed primarily to those interested in working with the lower primary-aged child. Three class hours per week.

## **Cross-Disciplinary Courses**

### **CD0201 Bioethics \***

A one-semester course; three credit hours. An examination of the interrelationship between philosophy and problems arising from advances in modern biology, including the ethical implications of the problems of population control, resource

allocation and biomedicine. This is a discussion course for those students who enjoy dealing with ideas. There are no prerequisites, but a general background in the sciences or philosophy may make the ideas presented in the course more meaningful. This course might not be transferable as a science requirement. Three class hours per week.

#### **CD0301 East Asian Culture \***

A one-semester course; three credit hours. A survey aimed at introducing the student to the principal features of traditional Chinese and Japanese culture through a topical treatment of some of the major social, political, intellectual, religious, economic and artistic trends which characterized traditional life in these two East Asian countries from the beginning of their respective histories to about 1800. Three class hours per week.

#### **CD9575 History of Science and Technology \***

A one-semester course; three credit hours. The study of the historical and philosophical development of science and technology and the practical consequences of discovery on the human activities. The course focuses on the examination of the interplay of science and technology with their social and intellectual impact through the ages. The course may be applied towards a social science or a natural science requirement. Three class hours per week.

\* This course is cross-disciplinary when team-taught by faculty from more than one department. Course is also listed under offerings of departments which sponsor it.

## **Civil Technology**

#### **CE6601 Surveying I**

A one-semester course, four credit hours. The course is designed to give the student proficiency in the use of surveying instruments. Emphasis is placed on taping, tape corrections, elevation measurements and corrections, angular measurements and adjustments. Neat note-taking is stressed. Three class hours and three laboratory hours per week.

#### **CE6602 Surveying II**

A one-semester course, four credit hours. The course is designed to give the student proficiency in the calculations and measurements for traverses, circular curves, vertical curves, areas, stadia and topographic surveys. Use of modern instruments and calculation techniques are stressed. Three class hours and three laboratory hours per week.

**Prerequisite: MA5621 and CE6601  
or equivalent experience**

#### **CE6603 Advanced Surveying**

A one-semester course, four credit hours. The course is designed to give the student advanced, specialized surveying experience in construction surveying, land boundary surveying, instrument adjustment, Meridian determination, photogrammetry, aerial mapping and an introduction to court procedures. Emphasis is placed on highway layout, profiles, cross sections, utility layout, volume estimation, boundary determination,

boundary layout and subdivisions, using all available information efficiently. Three class hours and three laboratory hours per week.

**Prerequisite: CE6602 or equivalent**

#### **CE6612 Drawing for Civil Technology**

A one-semester course; one credit hour. A course designed to give the student a good knowledge of some of the specialized drafting techniques required in the practice of civil technology. Topics covered are plan drawing, cross section drawing, profile drawing, inking techniques, printing techniques, etc. Three laboratory hours per week.

**Prerequisite: CE6601**

#### **CE6651 Mechanics for Civil Technology**

A one-semester course; three credit hours. Course is designed to give the student a knowledge of statics and dynamics as applied to civil technology problems. Analysis of forces acting on bodies both at rest and in motion are studied in detail. Three class hours per week.

**Prerequisite: PI5622**

#### **CE6653 Strength of Materials**

A one-semester course, four credit hours. The course is designed to acquaint the student with the relationship between externally applied forces and the internally induced stresses in various types of structural members and parts, such as bolts, rivets, shafts, pressure tanks, beams and columns. Also covered is the relationship between the externally applied forces and the resulting deformations. Particular attention is given to beam bending, column loadings, tension in shafts, centroids and moments of inertias and combined stresses in structural elements. Three class hours and three laboratory hours per week.

**Prerequisite: CE6651 or equivalent**

#### **CE6654 Structural Analysis and Design**

A one-semester course, three credit hours. The course includes the fundamental principles involved in the design of steel and reinforced concrete structures. The student learns the basic analysis and design techniques for beams, columns, walls, footings, retaining walls, floor systems and flat slabs as specified by modern building codes. Fundamentals of timber design are also covered. Three class hours per week.

#### **CE6665 Transportation Engineering**

A one-semester course; three credit hours. Designed to familiarize the student with all forms of modern transportation systems: the advantages, disadvantages and peculiarities of each system. Systems studied include highway, railroad, airplane, water, pipelines, conveyors and undersea vehicles. Three class hours per week.

#### **CE6671 Sanitary Engineering**

A one-semester course; three credit hours. The course is designed to give the student a knowledge of the problems and solutions of water supply and sewerage. The course considers the problems of water from rainfall, through storage, storm drainage, hydraulics, distribution and treatment of drainage water, collection, disposal and treatment of sanitary sewage. Water and storm drainage and sanitary sewerage systems design is stressed. Three class hours per week.

### **CE6672 Soil Mechanics**

A one-semester course; four credit hours. The course is designed to give the student a basic knowledge of the problems of soil. The course teaches the student to understand and evaluate the properties of soil materials. Lectures are reinforced by the use of a soil testing laboratory which enables the student to develop a thorough knowledge of soil testing techniques and proper use of experimental data. The course also deals with the topics of the interaction of soils with groundwater, consolidation of soil and settlement of structures, and the bearing capacity of soil under foundations. Three class and three laboratory hours per week.



## **Chemistry**

### **CH5001 Pre-College Chemistry**

A one-semester course; no credit hours. This course is designed for the student who plans at a future date to enroll in a first-year college chemistry course and desires a head start. Topics covered include energy, matter, measurements, interaction between atoms and chemical equilibrium. The use of mathematics will be at a minimum. Three class hours per week.

### **CH5501 General Chemistry I**

A one-semester course; four credit hours. Deals with physical chemistry. The study of the principles of chemistry by a reliance on the measurement and mathematical treatment of chemical units; the application of these units to the interaction of chemical substances under mechanical, thermal and electrical changes as exemplified by considering the combinations by weight, the gas laws, electro-chemistry and chemical equilibrium in gaseous and solution reactions. Three class hours and three laboratory hours per week.

**Prerequisite: One year of college math.**

### **CH5502 General Chemistry II**

A one-semester course; four credit hours. A continuation of General Chemistry I dealing with physical and inorganic chemistry and an introduction to organic chemistry. Three class hours and three laboratory hours per week.

**Prerequisite: CH5501**

### **CH5503 Introductory Chemistry I**

A one-semester course; four credit hours. The course covers the basic understanding of atomic structure of the elements, periodic table and radioactivity. The study of solid, liquid and gaseous states of matter is undertaken. Three class hours and two laboratory hours per week.

### **CH5504 Introductory Chemistry II: Inorganic Chemistry**

A one-semester course; four credit hours. The course covers the study of solutions, acids, bases and neutralization. The application of physical chemical theory to inorganic chemistry. A brief review of organic chemistry is undertaken with special emphasis on how this aspect of chemistry relates to biological systems. Three class hours and two laboratory hours per week.

**Prerequisite: CH5503**

### **CH5507 Introductory Chemistry II: Organic Chemistry**

A one-semester course; four credit hours. Organic chemistry is the study of organic compounds. The course includes the synthesis of aliphatic and aromatic compounds from petroleum and coal derivatives and the study of the functional groups of these primary series. The course will provide a foundation for the study of complex carbon compounds in a technological society with special emphasis towards the understanding of the chemistry of the life sciences. Three class hours and three laboratory hours per week.

**Prerequisite: CH5501, CH5502, CH5503 and CH5504, or permission of instructor**

### **CH0000 Special Topics in Chemistry**

A one-semester course; one to four credit hours. Directed readings, directed research, seminar or class in specific topics in discipline. The procedures to be followed and approval forms are available in the Registrar's office.



## **Cooperative Education**

### **CO4401 Cooperative Education I**

A one-semester course; three credit hours. Cooperative education is designed to provide the student with off-campus experiences related to his/her educational needs and/or goals, subject to the guidelines established by the student's academic department and the Office of Cooperative Education. Grade is based upon employer's evaluation of student's growth, coordinator's evaluation of student's performance and evaluation by the student's advisor. (NOTE: The advisor may be any member of the student's academic department and/or any other person designated by the chairperson of the division in

which the student is studying.) A minimum of 180 hours of work experience is required per semester.

**Prerequisite:** Prior approval of division chairperson responsible for student's program and the Office of Cooperative Education. Students must be working in paid positions.

#### **CO4402 Cooperative Education II**

A one-semester course; three credit hours. A second course in cooperative education designed to provide students with additional off-campus experiences related to their educational needs and career goals, subject to the guidelines established by the student's academic department. Grade is based upon employer's evaluation of student growth, coordinator's evaluation of student's performance and over-all evaluation by the student's advisor. Students are expected to increase their responsibilities over and above what was performed during CO4401 Cooperative Education I or CI4401 Career Internship I. A minimum of 180 hours of work experience is required per semester.

**Prerequisite:** Prior approval of division chairperson responsible for student's program and the Office of Cooperative Education. Students must be working in paid positions.

#### **CI4401 Career Internship I**

A one-semester course; three credit hours. Career internship is designed to provide students with off-campus experiences related to their educational needs and/or career objectives, subject to the guidelines established by the student's academic department and the Office of Cooperative Education. Grade is based upon supervisor's evaluation of student's growth, coordinator's evaluation of student's performance and advisor's evaluation of what took place during the semester. (NOTE: The advisor may be any member of the student's academic department and/or any other person designated by the chairperson of the division in which the student is studying.) A minimum of 180 hours of work experience is required per semester.

**Prerequisite:** Prior approval of division chairperson responsible for student's program and the Office of Cooperative Education. Students are expected to work in volunteer/non-paid positions.

#### **CI4402 Career Internship II**

A one-semester course; three credit hours. A second course designed to provide additional off-campus experiences in volunteer positions related to student's academic program and/or career objectives, subject to the guidelines established by student's academic department and the Office of Cooperative Education. Grade is based upon employer's evaluation of student's growth, coordinator's evaluation of student's performance and advisor's evaluation of what took place during the semester. Students are expected to increase their responsibilities over and above what was performed in CO4401 Cooperative Education I or CI4401 Career Internship I. A minimum of 180 hours of work experience is required per semester.

**Prerequisite:** Prior approval of division chairperson responsible for student's program and the Office of Cooperative Education. Students must be working in volunteer/non-paid positions.

## **Computer Technology**

#### **CT6601 Fundamentals of Digital Logic**

A one-semester course; three credit hours. The evolution of data processing or automatic computation. The mechanics of automatic computation including number system, logic, codes, arithmetic operations and organizations are covered in detail. Three class hours per week.

#### **CT6611 Business Programming [RPG]**

A one-semester course; four credit hours. Unit record equipment is studied as an off-lines aid to the use of a computer. Introduction to business programming through Report Program Generator coding. Three class hours and three laboratory hours per week.

#### **CT6622 Scientific Programming**

A one-semester course; four credit hours. A comprehensive study of FORTRAN and/or equivalent programming language with related mathematics. Three class hours and three laboratory hours per week.

#### **CT6631 Introduction to Data Processing**

A one-semester course; three credit hours. Data processing from manual systems to computers, developments in the field, the equipment involved, how the equipment is used, how it works, and the applications of data processing systems. Develops understandings preparing students to cope with the computer phenomenon as it relates to their field, or to further develop competency in machine operation or computer programming. Three class hours per week.

#### **CT6635 Basic Programming I**

A five-week course; one credit hour. Fundamentals of programming, including terminal operation, flow charting, simple loops, branching, numeric and string variables. Three class hours per week.

#### **CT6636 Basic Programming II**

A five-week course; one credit hour. Nesting loops, subscripted variables, string manipulation, subroutines. Three class hours per week.

**Prerequisite:** CT6635

#### **CT6637 Basic Programming III**

A five-week course; one credit hour. Functions, data storage and retrieval techniques, advanced project of special interest to the student. Three class hours per week.

**Prerequisite:** CT6636

#### **CT6651 Assembly Language Programming**

A one-semester course; four credit hours. Thorough study of the absolute machine language and the assembler for the computer on campus. Three class hours and three laboratory hours per week.

### **CT6652 Business Programming [COBOL]**

A one-semester course; four credit hours. A detailed study of COBOL and/or equivalent programming language with applications. Three class hours and three laboratory hours per week.

### **CT6653 Advanced Business Programming**

A one-semester course; four credit hours. Basic concepts of programming systems, advanced concepts of Report Program Generator language, tape and disk applications in RPG and COBOL, updating programming concepts. Three class hours and three laboratory hours per week.

**Prerequisite: CT6611 and concurrent enrollment in CT6652**

### **CT6661 Advanced Computer Systems Programming**

A one-semester course; four credit hours. Advanced topics such as disk and the file organization, interrupt programming, linkage of programs written in different languages plus a study of the various instruction formats and types of instructions found in modern equipment. This is partially accomplished by programming the 360 Assembler. Three class hours and three laboratory hours per week.

**Prerequisite: CT6651**

### **CT6676 Systems Development and Design**

A one-semester course; four credit hours. Effective use of data processing equipment in meeting the needs of business. The approach, requirements of the systems, developing the solution, data and system implementation. Three class hours and three laboratory hours per week.

### **CT6682 Computer Application in Engineering and Technology**

A one-semester course; four credit hours. The course is designed to give the student a knowledge of the computer solutions to the great quantities of calculations that are necessary in practice. Basic computer operation and programming techniques are covered with emphasis on FORTRAN, BASIC, COGO and STRESS languages. Three class hours and three laboratory hours per week.

**Prerequisite: MA5621 and MA5622**

## **Deafness Communication**

### **DC1001 Deafness: Orientation to Deafness and Deaf People**

A one-semester course; three credit hours. General introduction to deafness, deaf people and communication. This course will be eclectic and provide students with didactic elements of deafness that will set the foundation for specific skill courses and associated, related fields of interest. Deafness will be defined. Three class hours per week.

### **DC1002 Deafness: Basic Manual Communication**

A one-semester course; three credit hours. Basic elements of expressive and receptive manual communicative techniques - Fingerspelling (American One-Hand Manual Alphabet) and Signs (American Sign Language) - for communicating with deaf children and adults will be demonstrated and practiced in manual English. Three class hours per week.

### **DC1004 Deafness: Intermediate Manual Communication**

A one-semester course; three credit hours. Review of basic sign vocabulary. Practice in receptive fingerspelling and signs. This course will provide a continuation and refinement of basic skills learned in DC1002 (Deafness: Basic Manual Communication with Deaf People). Development of sign vocabulary, increased expressive and receptive proficiency and fluency will be stressed. Three class hours per week.

**Prerequisite: DC1002 or equivalent with permission of the instructor**

### **DC1006 Deafness: Introductory Ameslan**

A one-semester course; three credit hours. Review of those Ameslan (American Sign Language/ASL) elements which were introduced in DC1004. Ameslan is a language in its own right, different and separate from English. ASL has its own syntactical structure and follows its own morphological rules, which will be taught and demonstrated. The student will be responsible for learning the basic Ameslan structure. Practice in receptive and expressive Ameslan will be made available in and out of classroom situations. Three class hours per week.

**Prerequisite: DC1004 or equivalent with permission of the instructor**

### **DC1008 Deafness: Advanced Ameslan**

A one-semester course; three credit hours. This course is a continuation of Introductory Ameslan and will increase the knowledge and refine the receptive and expressive skills in Ameslan. Three class hours per week.

**Prerequisite: DC1006 or equivalent with permission of the instructor**

### **DC1010 Deafness: Introductory Interpreting for Deaf People**

A one-semester course; three credit hours. This course is designed to initiate training, using manual communication, of students who wish to become professional interpreters for deaf people. A thorough knowledge of finger-spelling and signing at the Ameslan level of proficiency is required. Emphasis will be on the use of the American Sign Language in the discipline of interpreting for deaf people. Three class hours per week and out-of-class projects and experience.

**Prerequisite: DC1008 or equivalent with permission of the instructor.**

### **DC1012 Deafness: Advanced Interpreting for Deaf People**

A one-semester course; three credit hours. Continuation of Introductory Interpreting for Deaf People. This course is designed to complete interpreter training of those students who wish to become certified, professional interpreters for deaf people. Emphasis will be on reverse interpreting and interpreting in special situations; e.g., court and classroom. Students will have an opportunity to increase speed and accuracy. Three class hours per week and out-of-class, individual projects and expanded experiences and evaluation.

**Prerequisite: DC1010 or equivalent with permission of the instructor.**

## **Economics**

### **EC3311 Principles of Economics I - Micro-Economics**

A one-semester course; three credit hours. Introduction to micro-economics. This semester centers upon the functioning of individual markets and their effectiveness for resource allocation. Includes price and production theory, the distribution of income, comparative economic systems, international trade, and the theory of household behavior. Three class hours per week.

### **EC3312 Principles of Economics II - Macro-Economics**

A one-semester course; three credit hours. Introduction to macro-economic analysis and policy. An examination of the foundation and nature of economic principles as they apply to national output, money and banking, and monetary and fiscal policy. Course also focuses upon the problems of employment, inflation and economic growth as illuminated by modern national income analysis. Three class hours per week.

**Prerequisite: EC3311**

### **EC3652 Survey of Economics**

A one-semester course; three credit hours. A non-technical survey of current economic problems. Background of economic concepts and terminology. Some focus on comparative economic systems. Not recommended for transfer students. Three class hours per week.

### **ED2201 Introduction to Learning Disabilities**

A one-semester course; three credit hours. The variety of learning disabilities will be identified. Techniques for teaching reading, spelling, handwriting and mathematics to elementary school-aged, learning-disabled children will be explored and demonstrated. Basic diagnostic tools will be reviewed. This course is directed primarily to the person who is or who seeks to be an instructional aide working with learning disabled children (under the direction of a teacher or specialist). The course is also appropriate for parents of children with learning disabilities who wish to understand more about the nature of their children's disabilities. Three class hours per week plus out-of-class projects and experiences.

### **ED2203 Introduction to Communication Disorders**

A one-semester course; three credit hours. An overview of speech and language disorders will be presented. The language learning process as it relates to child development will be discussed. Causes of communication breakdown will be explored. Materials and techniques to deal with these communication disorders will be demonstrated. This course is recommended for paraprofessionals, teachers and parents dealing with language disorders in youngsters. Three class hours per week plus out-of-class projects and experiences.

### **ED2206 An Introduction to Speech Disorders**

A one-semester course; three credit hours. This course will introduce students to a basic knowledge of the anatomy of speech, articulatory functioning, therapy processes and the associated ethical considerations of the profession. Three class hours per week plus out-of-class projects and experiences.

**Prerequisite: Completion of ED2203 or permission of the instructor**

### **ED2210 Introduction to Classroom Experience**

A one-semester course; one credit hour. An initial opportunity for observation and work experience in the classroom setting, including mechanics, group work, individual tutorial assistance and other related and relevant activities. This course will generally be taken simultaneously with ED2244 Introduction to the Role of the Educational Assistant. Students will keep a daily journal of their activities, as specified by the practicum supervisor. Four practicum hours per week.

**Prerequisite: Enrollment in the program or permission of the instructor**

### **ED2212 Classroom Experience I**

A one-semester course; four credit hours. The student will develop increased familiarity with the role and responsibilities of the educational assistant. Under the supervision of a cooperating teacher, the student will work with children in large and small groups as well as in a tutorial manner. The student will also assist the teacher in other activities deemed valuable and appropriate. Students shall be required to maintain a journal as specified by the practicum supervisor. One class hour and twelve practicum hours per week including preparation and conference time.

**Prerequisite: Enrollment in the program or permission of the instructor**

## **Educational Assistant: Language Communication**

### **ED0403 Teaching Reading in the Elementary Grades**

A one-semester course; three credit hours. A variety of instructional approaches from basal readers to individualized reading programs will be explored. This course focuses primarily on techniques and materials for teaching basic elementary reading skills. Readiness, phonics and word analysis, vocabulary, comprehension and study skills. Students will gain familiarity with diagnostic tools including the Informal Reading Inventory. Current issues will be examined. Three class hours per week plus out-of-class projects and experiences.

#### **ED2244 Introduction to the Role of Educational Assistant**

A one-semester course; three credit hours. The primary objective of the course is to assist the student in better understanding the role and responsibilities of an educational assistant. Course activities will include lectures, guest speakers, small and large group discussion and field trips. The emphasis of all activities will be upon a sharing of knowledge and experience in order to assist the student to more clearly understand the assistant's role. Three class hours per week

#### **ED2255 Classroom Experience II**

A one-semester course; four credit hours. The student shall build upon the experience gained in ED2244 and ED2212 in developing increased familiarity with the role and responsibilities of the educational assistant. Students shall be required to maintain a journal as specified by the practicum supervisor. One class hour and twelve practicum hours per week, including preparation and conference time.

**Prerequisite: Enrollment in the program or permission of the Program Coordinator**

#### **ED2256 Classroom Experience III**

A one-semester course; four credit hours. The student shall build upon the experience gained in ED2211, ED2244, ED2212 and ED2255 in developing increased familiarity with the role and responsibilities of the educational assistant. One class hour and twelve practicum hours per week, including preparation and conference time.

**Prerequisite: Enrollment in the program or permission of the Program Coordinator**

#### **ED2260 Intensive Classroom Experience**

A four-week course; three credit hours. The student shall work in a classroom for five full days for four consecutive weeks. The student will build upon experience in ED2212. The course provides an opportunity for the student to follow through on learning activities and to participate in a variety of experiences not available in other courses in which work is done two days each week. There will be four class sessions of four hours duration with the practicum supervisor. A journal will be required as specified by the practicum supervisor. This course may be taken in lieu of ED2212, ED2255 or ED2256. 128 to 140 practicum hours and 16 classroom hours per semester.

**Prerequisite: Enrollment in the program and permission of the Program Coordinator**

#### **ED2262 Education Seminar**

A one-semester course; three credit hours. In this seminar course the students will be given an opportunity to summarize and analyze their classroom experience. In addition, they will be exposed to and involved in a number of areas directly related to the role and responsibilities of the educational assistant. Guest speakers, research projects, seminar discussions and other activities will be included. Three class hours per week.

### **Administrative Assistant: Education Option**

#### **ED6670 School Budgeting and Records Management**

A one-semester course; three credit hours. The keeping of financial, student, personnel, inventory and other records. Indexing principles review, filing procedures and techniques as applied to educational systems. Three class hours per week.

#### **ED6671 School Law**

A one-semester course; three credit hours. An introduction to Massachusetts public school law as it pertains to the educational secretary. Three class hours per week.

#### **ED6672 School Administration**

A one-semester course; three credit hours. A study of educational organization and the system designed for effective functioning of educational groups. Emphasis is placed on decision-making and priority-setting within an educational frame of reference. Three class hours per week.



### **Communications: Liberal Arts**

#### **EN0101 Journalism I**

A one-semester course; three credit hours. The course provides background and training in journalistic writing with the emphasis on the techniques of newspaper reporting and publication. Attention is also given to preparation of scripts and tapes for broadcasting as well as writing the press release. Three class hours per week.

## **EN0102 Journalism II**

A one-semester course; three credit hours. Advanced reporting and news production. Assignments relate to covering public affairs (including local government and community services) in the Merrimack Valley. The student will assist in the production of THE OBSERVER, the student newspaper. Required: at least five well-developed articles published in area publications. Three class hours per week.

**Prerequisite: EN0101 Journalism I or permission of the instructor**

## **EN0121 Creative Writing**

A one-semester course; three credit hours. A seminar in writing beyond the freshman level especially recommended for English majors, prospective teachers and students who have exempted freshman English. The art of various types of imaginative literature is examined as a guide to the development of individual style, with emphasis on writing practice and group evaluation. Three class hours per week.

## **EN0401 Reading Strategies**

A one-semester course; three credit hours. Designed to expose students to effective reading and study techniques. Emphasis is placed on understanding the printed word in various forms - phrases, sentences, paragraphs, and whole selections. Some of the areas explored include concepts such as main ideas; significant details; vocabulary expansion and idea relationships like cause and effect, comparison/contrast, explanation, etc. The application of processes such as association, visualization, concentration and repetition is stressed to facilitate interpretation and memory of passages. Critical reading skills and organized approaches to study are also considered. Diagnostic testing is done at the beginning and end of the course. Three class hours per week.

## **EN1278 Principles of Teaching English as a Second Language**

A one-semester course; three credit hours. An introduction to the principles and techniques of teaching English to non-native speakers; includes two hours of assistant teaching in the Northern Essex ESL Program. There are two one-hour classes each week which deal with linguistic conventions, phonemics, phonics, sound production and usage, as well as cross-cultural communications, cultural shock and first language interference. The students participate in a rich cross-cultural experience including leading group discussion, field trips, analyzing and evaluating ESL student progress, and the researching and developing of one unit of instruction. Recommended for students interested in teaching or social service. Two class and two laboratory hours each week.

## **EN1280 E.S.L. I [Introductory]**

A one-semester course; three credit hours. Study of English as a second language for non-native speakers. Includes listening, speaking, reading and writing skills, with emphasis on conversation, sentence structure and vocabulary. Cross-cultural orientation and learning to live in the American milieu are also stressed. Small group and individual instruction. Seven class hours plus optional seven laboratory hours per week.

## **EN1281 E.S.L. II [Intermediate]**

A one-semester course; three credit hours. Includes review of

introductory grammar and vocabulary. Emphasis is on structure of writing. Also includes cross-cultural orientation and learning to live in the American milieu. Small group and individualized instruction. Seven class hours plus optional seven laboratory hours per week.

**Prerequisite: satisfactory score on placement test given at time of registration.**

## **EN1282 Advanced E.S.L. I**

A one-semester course; three credit hours. Study of English for non-native speakers at an advanced level. Includes grammar review, listening and reading comprehension, word attack skills, discussions, pronunciation review, cross-cultural communication and paragraph writing. Seven class hours plus optional seven laboratory hours per week.

**Prerequisite: Satisfactory score on placement test given at time of registration.**

## **EN1283 Advanced E.S.L. II**

A one-semester course; three credit hours. Study of English for non-native speakers at an advanced level. Emphasis on preparation for English composition courses. Practice in written English skills, listening and reading comprehension, if needed. Completion of grammar review from E.S.L. I. Seven class hours plus optional seven laboratory hours per week.

**Prerequisite: satisfactory score on placement test given at time of registration and fluency in English conversation skills**

## **EN2455 The Art of the Movies**

A one-semester course; three credit hours. This course will attempt to foster critical taste in film. Students will explore the role of film in contemporary society by viewing and discussing documentaries, experimental films, impressionistic films, animated films and commercial films. Discussion and analysis will acquaint the student with the interrelationship of film technique and content. Three class hours per week.

## **EN2457 Film Production**

A one-semester course; three credit hours. The student will learn 1) the basic tools and technology of the Super 8 film format; and 2) the practical and aesthetic application of this knowledge to creative filmmaking through weekly assignments in theory and six filmmaking projects. The student will pay for the cost and processing of his/her film. Three class hours per week. Limited to 18 students.

**Prerequisite: EN2455 Art of the Movies or permission of the instructor**

## **EN3333 Broadcast Reporting and Announcing**

A one-semester course; three credit hours. The student will learn through the study of current radio and television practices: 1) how to edit and write news items for the radio and TV news media; 2) how to broadcast these items on radio and TV; 3) how to use basic equipment associated with radio and TV news gathering and production; and 4) how to evaluate current broadcasting practices. Students are encouraged, though not required, to have access to a portable tape recorder and stopwatch. Three class hours per week.



#### **EN3334 Television Production**

A one-semester course; three credit hours. The student will learn through the study of current television practices: 1) how to write for, edit, produce and direct various complete television programs in a non-dramatic format; 2) how to operate the equipment in the TV studio and control centers; and 3) how to evaluate television content. While the emphasis will be on the TV news program in which the student will learn how to work as an assignment editor and anchor person, the student will also learn the basic techniques of the extended interview, the panel show and the documentary. Three class hours per week. Limited to 18 students.

**Prerequisite:** EN3333 Broadcast Reporting and Announcing and permission of the instructor

#### **EN4311 Communications I**

A one-semester course; three credit hours. A writing and reading course for students in the Discovery Program only which is closely related to Humanities I. The origin of language, social aspects of language, presymbolic and symbolic language and social control through language will be studied as they relate to man's biological and social nature. Writing and reading assignments will be interrelated with Humanities I. Three class hours per week.

#### **EN4400 Introduction to College English**

A one-semester course; three credit hours. Designed for students who lack the writing skills necessary to succeed in English Composition I. Emphasizes the composition of sentences, paragraphs and short essays. Attention is also given to punctuation, grammar and spelling on an individualized basis. Those students who successfully complete the course will receive three credit hours; however, these credits do not satisfy any part of the English composition requirements for graduation. The course meets formally for three hours per week and informally for one hour per week. Class size is limited to 15 students. Enrollment is dependent on faculty advisor's referral, counselor's referral or permission of the instructor.

#### **EN4401 English Composition I**

A one-semester course; three credit hours. A required course to develop clear, effective writing, including the special techniques in communication and the development of ideas that enable students to organize their thoughts and interest others in what they say. Students will be required to demonstrate their writing competency based upon written minimum standards established by the department. Three class hours per week.

**Prerequisite:** Students entering English Composition I will be required to produce a writing sample. Students whose writing sample gives evidence of deficiency, based upon departmental criteria, will be strongly urged to postpone taking English Composition I until they have completed a preparatory writing or reading course or done other independent remedial work supervised by a staff member.

#### **EN4402 English Composition II**

A one-semester course; three credit hours. Analytical writing: continuing focus on thesis-supported papers and extending its range. Three different emphases are offered to accommodate the variety of student interests:

**Option 1: Introduction to Literature** - an examination of selected literary forms (short story, novel, poem, drama) through study of form or theme. Selections will be made on the grounds of literary excellence, accessibility and immediacy of interest.

**Option 2: Film** - an examination of selected documentary, fictional, experimental and animated films to discover the similarities and differences between cinematic and literary forms.

**Option 3: Practical College Writing** - specifically directed to the needs of the student seeking the bachelor's degree. Among the forms of writing that will be taught are the essay test, a critical review of a non-fiction book, the research paper in the humanities and analytical papers on poetry, drama and fiction.

Three class hours per week.

**Prerequisite:** Completion of EN4401 with a grade of C or better.

### **EN4676 Technical Writing**

A one-semester course; three credit hours. Engineering and scientific report writing. General inductive exposition with emphasis upon research writing, industrial reports and graphic techniques. Three class hours per week.

**Prerequisite: EN4401 and EN4402**

### **EN8011 Speech/Oral Communication**

A one-semester course; three credit hours. Instruction and practice in skills essential to effective oral communication. The course includes organization, presentation, audience analysis and group theory. Three class hours per week.

### **EN8012 Oral Interpretation**

A one-semester course; three credit hours. Designed to present the various techniques in effective oral reading. Stress is placed on vocal flexibility, imagery and emotional involvement. A wide range of dramatic literature will be used. Three class hours per week.

### **EN8401 Children's Literature**

A one-semester course; three credit hours. An introductory course in children's books. Considers the history of children's literature and contemporary authors. Study of criteria of good literature, children's interests and developmental stages related to books, various genre of children's literature, children's book awards, illustrators and authors, and reference sources. Three class hours per week.

### **EN8801 The Bible as Literature**

A one-semester course; three credit hours. Designed to capture the atmosphere and literary qualities and techniques of the Hebrew and Greek scriptures in translation, including reading and analysis of the several genres: poetry, drama, short story, hortatory essay and others. Three class hours per week.

### **EN8851/EN8852 American Literature I & II**

A two-semester course; three credit hours per semester. A study of the most important American novelists, poets and belle-lettists from 1850 to the present. The emphasis is on the reading of works in their entirety, with depth of reading as well as catholicity being the objective. Typical authors who will form the subject of the course: Frost, Eliot, Hemingway, Faulkner, Salinger, Sinclair Lewis, Dreiser, Crane, Mark Twain, Melville, Hawthorne. Three class hours per week.

### **EN8853/EN8854 British Literature I & II**

A two-semester course; three credit hours per semester. A study of the major works of selected English poets, dramatists and prose writers, with their historical and literary background will be directed through lectures and prescribed reading, with special exercises in interpretation and criticism. Three class hours per week.

### **EN8856 Major Writers I**

A one-semester course; three credit hours. The course will examine the principal works of a major writer or writers of Classical, European, English, American or Eastern literature. The author or authors examined will differ from year to year. Three class hours per week.

### **EN8857 Major Writers II**

A one-semester course; three credit hours. The course will analyze the major works of F. Scott Fitzgerald and Ernest Hemingway and also study the relation of these writers to each other and to contemporary literature and society. Three class hours per week.

### **EN8861/EN8862 Western Literature I & II**

A two-semester course; three credit hours per semester. An analysis of the literary masterpieces of the Western Tradition, emphasizing the literary philosophy and art of each author. Authors to be considered include Homer, Sophocles, Aeschylus, Plato, Dante, Strindberg, Ibsen, Cervantes, Chekhov, Gogol, Hawthorne, Melville. Variations in selections and authors occur from year to year. Three class hours per week.

### **EN8863 Modern European Literature**

A one-semester course; three credit hours. Focus on the individual's existential response to the human condition as seen in the works assigned; treatment of literary movements represented by these works: existentialism, new-romanticism, rural naturalism, symbolism, impressionism, expressionism, literature of psychology; supplementary readings on philosophy, religion, psychology as they apply to various works; in addition to required readings one major project will be required. Three class hours per week.

### **EN8881 The American Novel**

A one-semester course; three credit hours. Reading and discussion of significant novels of the nineteenth and twentieth centuries. Included among the authors considered are Twain, Melville, Hawthorne, Crane, Dreiser, Henry James, Fitzgerald, Steinbeck, Anderson, Hemingway, Salinger, Bellow, Faulkner, Flannery O'Connor. Analysis of form and philosophy. Three class hours per week.

### **EN8883 Women in Literature & Life**

A one-semester course; three credit hours. A study of literary and historical accounts of women in courtly society - late Middle Ages through early Renaissance - and in democratic society - 1890 to 1970 - for the purpose of tracing the cultural influence of an idea, the idea of courtly love, on literature and life. One lecture hour and one two-hour seminar discussion per week.

### **EN8884 Twentieth Century Woman in Film & Art**

A one-semester course; three credit hours. Offers the student an examination of the multiple views of woman as seen through the arts of this century. Looking at examples from poetry, literature, film, sculpture and painting, the student will be exposed to the varied attitudes toward self, beauty, socialization, exploitation and destiny of the twentieth century woman. The course is to be offered on an alternate basis with Women in Literature and Life. It is suggested that the student take Women in Literature and Life prior to this course, but it is not mandatory. Three class hours per week.

### **EN8891 Introduction to Poetry**

A one-semester course; three credit hours. Designed to acquaint the student with the various forms and scope of poetry. This course is to be an overview of the concept of poetry. Three class hours per week.

### **EN8893 The Contemporary Novel**

A one-semester course; three credit hours. Readings in British, American, French, German, Russian and South American fiction with special emphasis on philosophical and arch typal linkage. Three class hours per week.

### **EN0000 Special Topics in English**

A one-semester course; one to four credit hours. Directed reading, directed research, seminar or class in specific topics in discipline. The procedures to be followed and approval forms are available in the Registrar's office.

## **Earth Sciences**

### **ES5010 Earth Science**

A one-semester course; three credit hours. A survey of the earth sciences. This course will examine various earth systems and processes including the earth as a planet, the atmosphere and weather, the oceans, the solid earth and its materials, and such processes as volcanism, weathering, glaciation, erosion and tectonics. This course should not be taken by students who have had Physical Geology or Meteorology. Three class hours per week.

### **ES5501 Meteorology**

A one-semester course; four credit hours. A basic study of the elements which constitute weather: temperature, pressure, winds, humidity and precipitation. Further study includes global patterns of weather conditions and the resultant climatic zones. Three class hours and two laboratory hours per week.

### **ES5502 Physical Geology**

A one-semester course: four credit hours. Introduction to landforms and the processes of their formation: erosion by wind, water, ice, beaches and wave action. Further study is accomplished through the use of topographic maps. Additional topics include descriptions of basic rocks and minerals, volcanism, mountain building and crustal movement. Three class hours and two laboratory hours per week.

### **ES5504 Mineralogy**

A one-semester course; three credit hours. An introductory course in the basic rock-forming minerals. The classification of minerals is examined on the basis of chemical, physical and optical properties, with an introduction to crystal structure. The course concludes with a study of basic rock groups based on their mineralogical composition. Laboratory work centers on the identification of the more important minerals in both hand specimens and microscopic thin sections. Two class hours and two laboratory hours per week.

**Prerequisite: ES5502 or permission of instructor**

### **ES0000 Special Topics in Earth Science**

A one-semester course; one to four credit hours. Directed readings, directed research, seminar or class in specific topics in discipline. The procedures to be followed and approval forms are available in the Registrar's office.

## **Electronics**

### **ET6111 Introduction to Electric Circuits**

A one-semester course; three credit hours. An introduction to DC resistive circuits including use of meters to measure resistance, current, voltage and power. Ohm's law, series circuits, parallel circuits and series-parallel circuits. Two class hours per week.

### **ET6113 Introduction to Electronics**

A one-semester course; one credit hour. An introductory course necessary for electronic technology including construction techniques, proper drawing of schematics and graphs, computer-aided solutions of circuit problems and elementary programming in BASIC. One two-hour class/lab per week.

### **ET6601 Graphics**

A one-semester course; two credit hours. This course stresses communication by graphical or pictorial means. Lettering, graphics sketching, orthographic projection, auxiliary views, dimensioning and descriptive geometry principles are topics covered. Neatness is emphasized throughout. One class hour and three laboratory hours per week.

### **ET6603 Digital Electronics Laboratory**

A one-semester course; one credit hour. Soldering, wire-wrapping and proper interconnection of TTL integrated circuits. Experiments in digital logic circuits using gates, flip-flops, counters, etc. One three-hour laboratory period per week.

### **ET6611 Circuit Analysis I**

A one-semester course; four credit hours. Introduction to the analysis of electric circuits using D.C. sources. Applications of Kirchoff's Voltage and Current Laws, superposition, loop analysis, modal analysis and Thevenin's Theorem. Three class hours and three laboratory hours per week.

### **ET6612 Circuit Analysis II**

A one-semester course; four credit hours. Extension of the theorems developed in ET6611 as they apply to circuits excited by sinusoidal sources. Energy considerations, storage of energy, RMS determinations and transformers. Three class hours and three laboratory hours per week.

**Prerequisite: ET6611**

### **ET6651 Engineering Mechanics I - Statics**

A one-semester course; three credit hours. Development of fundamental concepts of mechanics such as vectors, forces and moments. Detailed treatment of free body diagrams and their application to force systems. Laws of static equilibrium, friction forces, First and second moments, and problems involving various structures and machine parts. Methods of solution will include vector analysis, matrix methods and computer-aided analysis. Three class hours per week.

**Prerequisite: PI5623 and MA5683 or equivalent.  
MA5683 may be taken concurrently.**

### **ET6652 Engineering Mechanics II - Dynamics**

A one-semester course; three credit hours. Basic laws of kinematics of particles and rigid bodies involving linear,

angular, relative and absolute motion. Newton's Laws and their application to the kinematics of rigid bodies in translation, rotation and plane motion; and the principles of work, kinetic energy, impulse and momentum. Methods of solution will include vector analysis, matrix methods and computer-aided analysis. Three class hours per week.

**Prerequisite: ET6651**

### **ET6653 Circuit Analysis III**

A one-semester course; four credit hours. Study of the behavior of electric circuits excited by non-linear sources. Fourier series, pulse circuits and non-linear elements. Three class hours and three laboratory hours per week.

**Prerequisite: ET6612**

### **ET6655 Electronics V - Measurements**

A one-semester course; four credit hours. Study of the problems in precise measurements of the fundamental parameters of voltage, current, velocity, acceleration, displacement, time and events per unity time. Emphasis will be on usage and limitations of current equipment. Three class hours and three laboratory hours per week.

**Prerequisite: ET6612**

### **ET6661 Networks I**

A one-semester course; five credit hours. Introduction to general network solutions employing mathematical models and topology. The study of circuit analysis employing Kirchoff's laws, Thevenin's Theorem, Norton's Theorem, superposition and maximum power theorems, is emphasized. Four class hours and three laboratory hours per week.

**Prerequisite: MA5683 or equivalent;  
MA5684 should be taken concurrently.**

### **ET6662 Networks II**

A one-semester course; five credit hours. Sinusoidal analysis of circuits employing phasor analysis. Sinusoidal steady state response found by nodal, mesh, superposition, source transformations, Thevenins Theorem and phasor diagrams are explained. RMS values and average power and complex power is studied in detail. Major emphasis is placed on analysis using complex frequency (S-Plane). This would include frequency response of RL, RC, and RLC circuits (including resonance). The remainder of the course deals with two port network parameters and fourier series analysis. Four class hours and three laboratory hours per week.

**Prerequisites: ET6661, MA5685 concurrently**

### **ET6672 Electronics I**

A one-semester course; five credit hours. A first course beginning with introductory semiconductor physics and semiconductor devices. Biasing and stability of devices and small signal models of same. Applications of semiconductors in rectifiers and amplifiers. Field effect transistors. Four class hours and one three-hour laboratory period per week.

**Prerequisite: ET6612; ET6612 concurrently**

### **ET6673 Electronics II**

A one-semester course; five credit hours. The analysis of the behavior of multistage amplifiers, power amplifiers, tuned

circuit amplifiers, feedback amplifiers and oscillators. Integrated circuits, including differential and operational amplifiers and voltage regulators. Four class hours and one three-hour laboratory period per week.

**Prerequisite: ET6672**

### **ET6682 Digital Electronics**

A one-semester course; four credit hours. A study of traditional logic design as well as newer techniques utilizing MSI and LSI. Both combinational logic and sequential logic are covered including registers and counters. Also included is an introduction to memory and programmed logic. Three class hours and one three-hour laboratory period per week.

**Prerequisite: ET6612, ET6672**

### **ET6684 Electronic Systems**

A one-semester course; four credit hours. Types and characteristics of electronic systems. Introductory system analysis. Transducers and other system components. Integrated circuits including operational amplifiers, multipliers, D/A and A/D converters, phase locked loops. Applications of the above in communication and instrumentation systems. Three class hours and one three-hour laboratory period per week.

**Prerequisite: ET6612**

### **ET6685 Electronics I - Semiconductors**

A one-semester course; four credit hours. An introductory course in solid-state physics and semiconductor devices such as diodes, transistors, silicon controlled rectifiers, field effect transistors, unijunction transistors. Applications of these devices such as rectification and amplification are studied on an introductory basis. Three class hours and three laboratory hours per week.

### **ET6686 Electronics II - Electronic Circuits I**

A one-semester course; five credit hours. A course in transistor amplifiers including transistor manufacturing methods, biasing and stability, amplifiers in cascade, feedback amplifiers, operational amplifiers and frequency response. Course culminates in the design of a practical, functioning amplifier. Four class hours and three laboratory hours per week.

**Prerequisite: ET6685 and MA5621**

### **ET6689 Electronics III - Circuits II**

A one-semester course; five credit hours. Power amplifiers including Class A, Class B push-pull and Class C. Tuned circuit amplifiers. Oscillators. Modulation and demodulation. Power supplies and regulation. Op-amps as differentiators and integrators. Four class hours and three laboratory hours per week.

**Prerequisites: ET6686 and MA5622**

### **ET6690 Microcomputers and Peripherals**

A one-semester course; four credit hours. Introduction to microprocessors including basics of the CPU, timing and addressing, instruction sets, memory. Input/output techniques, terminals, tapes, disks. Introduction to data communications. Three class hours and one three-hour laboratory period per week.



## **Environmental Technology**

### **EV5621 Environmental Sanitation**

A one-semester course; four credit hours. Methods of disease transmission, hygienic excreta disposal, municipal and industrial liquid waste disposal methods, characteristics of water, water treatment, protection of ground water, insect and rodent control, solid waste collection and disposal, milk and food sanitation, swimming pool sanitation, industrial hygiene and air pollution. Three class hours and three laboratory hours per week.

### **EV5624 Air Resources Management**

A one-semester course, three credit hours. A course presenting the blending of all approaches designed for prevention and control of air pollution including abatement of smoke, control of auto exhausts and handling complaints as well as other technical and administrative facets of air resources management. Three class hours per week.

### **EV5625 Sanitary Chemistry I**

A one-semester course; four credit hours. Theory and laboratory technique for all control tests of water purification including bacteriology, color, turbidity, pH, alkalinity, hardness, coagulation, chlorides, fluorides, iron, manganese, detergents, bactericides and nitrates. Three class hours and three laboratory hours per week.

### **EV5626 Sanitary Chemistry II**

A one-semester course; four credit hours. Theory and

laboratory technique for the determination of solids, dissolved oxygen, oxygen consumed, relative stability, water and sewage bacteria, biochemical oxygen demand, organic nitrogen, volatile acids, toxic metals, stream studies, in-plant studies at nearby plants. Three class hours and three laboratory hours per week.

**Prerequisite: EV5625**

### **EV5627 Environmental Biology I**

A one-semester course; four credit hours. An introductory course to aquatic environments emphasizing the physical and chemical nature of lakes, ponds, rivers, streams. Relationship of the physical nature of water and micro flora and fauna and methods of sampling, culturing and identifying type organisms will be stressed. Three class hours and three laboratory hours per week.

### **EV5630 Atmosphere Sampling and Analysis**

A one-semester course; four credit hours. Methods of treatment, detailed study of at least two types of plants, basic design parameters of all units, quantity expected from population, application of package plants and application of septic tanks. Rules, regulations, forms and records. Three class hours and one three-hour laboratory period per week.

### **EV5632 Codes, Contracts and Specifications**

A one-semester course; three credit hours. Basic principles and methods most significant in contract relationships; appreciation of the legal considerations in construction work; study of the National Building Code and local building codes, interpreting and outlining specifications. Three class hours per week.

### **EV5635 Land Usage**

A one-semester course; three credit hours. This course will familiarize the students with the environmental factors involved in land resources allocation in wilderness, rural and urban areas. Systems techniques for determining environmental impact of proposed utilizations will be covered. Regenerative methods of resource exploitation will be covered with emphasis on aesthetic, safety and public health considerations. Three class hours per week.

### **EV5637 Environmental Biology II**

A one-semester course; four credit hours. Methods and techniques for sampling aquatic environments for algae, attached plants, plankton and larger fauna will be stressed. Identification of the common indicator organisms and their relation to the chemical and physical nature of the environment will be included. Three class hours and three laboratory hours per week.

**Prerequisite: EV5627**

### **EV5640 Solid Waste Management**

A one-semester course; four credit hours. The course will acquaint the student with problems involved in solid waste management and disposal including domestic, industrial and radioactive waste materials. Estimation of wastes and disposal techniques including land-fills, incineration, chemical treatment and recycling will be covered. Associated environmental effects will be emphasized. Three class hours and three laboratory hours per week.



## **Fine Arts:Liberal Arts**

### **FA7012 Introduction to the Creative Experience**

A one-semester course; three credit hours. This course is designed to introduce methods, materials and meaning of the arts to those who are involved in development programs - childhood to adulthood. It is the way to explore the world through non-verbal experiences which are personal to each one. Emphasis is placed on spontaneity, imagination, invention and flexibility of each student. Three class hours per week.

### **FA7051 Introductory Photography**

A one-semester course; three credit hours. This course provides the basic theory and practice of black and white photography. It covers such topics as camera controls, exposure, the nature of available and artificial light, negative and positive materials and chemicals, composition and film and print processing procedures. A variety of assignments provides practice in the use of photographic equipment, solving photographic problems and processing photomaterials in the darkroom. Two class hours and one two-hour laboratory workshop period per week.

**Prerequisite:** Permission of the instructor

### **FA7052 Intermediate Photography**

A one-semester course, three credit hours. Advanced techniques and projects in black and white photography and the basic theory and practice of color photography. Emphasis is on photographic self-expression and the techniques of creative photography including an introduction to studio and laboratory controls. Projects may be done in black and white or color. Part of the course allows students to work in a variety of different areas of photography according to each student's interest and desire. This multi-directional portion of the course may include photography, photomicrography, portraiture, photojournalism and the photo essay. Two class hours and one two-hour laboratory workshop period per week.

**Prerequisite:** FA7051 and permission of instructor

### **FA7081 Art as Experience and Idea I**

A one-semester course; three credit hours. Discussion and evaluation of all types of visual works of art. The class will deal with such questions as: What is Art? What is the role of Beauty in the definition of Art? How does one evaluate a work of Art? What is Creative Process? Who is the Creative Person? Three class hours per week.

### **FA7082 Historical Survey of Visual Ideas**

A one-semester course; three credit hours. Discussion and evaluation of visual works of art from pre-history to present day. While the first semester dealt with general concepts of art as related to all works of art, this course will place emphasis on the unique contribution of individual cultures in the development of the western world. Three class hours per week.

### **FA7083 Art Workshop: Painting, Drawing and Printmaking I**

A one-semester course; three credit hours. An introduction and an exposure to various materials which have the potential for two-dimensional expression. Emphasis will be on experiencing new materials and the inherent properties of these materials. All materials shall be provided by the student. There will be a total of five units, each exploring a different medium of expression. Three two-hour classes per week.

### **FA7084 Art Workshop: Painting, Drawing and Printmaking II**

A one-semester course; three credit hours. An introduction to composition and structure in two dimensions. Emphasis will be placed on explorations into the relationship between FORM and SPACE on the flat surface. Having come to some understanding of the potential of various materials, this semester will focus on using those materials to create compositions that involve a more complex analysis of space and form. The various visual elements of position, size, shape, line, color density, texture and space will be analyzed as to their function in a particular composition. Three two-hour classes per week.

**Prerequisite:** FA7083

## **Finance**

### **FI3652 Business Finance**

A one-semester course; three credit hours. Principles and practices of business finance. The short and long term sources of funds, management of financial assets, capital requirements, alternative forms of financing and the capital market. Some use of case study method. Three class hours per week.

### **FI6651 Principles of Insurance**

A one-semester course; three credit hours. Study of the principles of risk management and how insurance handles risk. The concept of risk management is outlined. Insurance coverages for the following are studied: property, liability, life and health. Three class hours per week.

### **FI6653 Credits and Collections**

A one-semester course; three credit hours. Study of the credit function in business. Subjects covered include the credit risk, credit instruments; consumer credit, sources of credit information, retail credit and collection methods. Three class hours per week.

### **FI6663 Principles of Real Estate**

A one-semester course; three credit hours. Survey of the various areas of real estate practice and the principles involved in the purchase, valuation and selling of real estate. Three class hours per week.

## **Fire Protection & Safety**

### **FP1001 Introduction to Fire Protection and Safety**

A one-semester course; three credit hours. Introduces the philosophy and history of fire protection and the history of the loss of life and property by fire; reviews municipal and industrial fire defenses; studies the organization and function of federal, state and private fire protection agencies; surveys professional fire protection and safety career opportunities. Three class hours per week.

### **FP1002 Fundamentals of Fire Prevention**

A one-semester course; three credit hours. Treats the organization and function of fire prevention, inspections, surveying and mapping procedures; emphasizes the recognition of fire hazards, engineering a solution of the hazard, enforcement of the solution and public relations as affected by fire prevention. Three class hours per week.

### **FP1004 Building Construction Systems**

A one-semester course; three credit hours. Includes an exploration of building construction and design with emphasis upon fire protection concerns and a review of statutory and suggested guidelines: local, state and national. Three class hours per week.

### **FP1005 Fire Protection Systems and Equipment**

A one-semester course; three credit hours. Studies fire detection and extinguishing systems of both automatic and manual types including sprinkler and standpipe systems, inert gases, foam and dry chemicals, temperature and smoke responsive devices, and alarm and signaling systems. Three

## **FA7085 Art Workshop: Hard Forms**

A one-semester course; three credit hours. An introduction to various hard materials used in three-dimensional expression. Emphasis will be on experiencing new materials and creating form in space. The class will explore such materials as plastics, wood, papier-mache. All materials shall be provided by the student. There will be a total of five projects, each exploring a different medium of expression. Three two-hour classes per week.

## **FA7086 Art Workshop: Soft Forms**

A one-semester course; three credit hours. Emphasis will be on exploration into the relationship between FORM and SPACE. Having come to some understanding of the potential of various materials, this semester will focus on using these materials to create compositions that involve an analysis of space and form. The student will be involved in solving problems using soft forms. All materials shall be provided by the student. Three two-hour classes per week.

**Prerequisite: FA7085**

## **FA7086 Art Workshop: Soft Forms**

A one-semester course; three credit hours. An introduction to various soft materials that have potential for three-dimensional expression. Emphasis will be on contrast with the hard materials explored in the first semester. The class will explore such materials as felt, rope, fabric and thread to create forms in space. All materials shall be provided by the student. Three two-hour classes per week.

**Prerequisite: FA7085**

## **FA7087 Art as Experience and Idea II**

A one-semester course; three credit hours. This course is a continuation of the materials presented in FA7081. It is built around the structure of art discussion and actually making art so that the student becomes aware that the process and the product are an integrated experience. Three class hours per week.

**Prerequisite: FA7081 or permission of instructor**

## **FA7091 Dance in Performance**

A one-semester course; three credit hours. The course will include a review of the basic techniques of Modern Dance, advance to more involved training in technique, movement and improvisation, and focus on the principle of dance production. Students will be introduced to production areas such as choreography, programming, costuming, lighting, public relations, audio-visual, special effects and budget, and they will participate in the final performance of the semester given for the community. Three class hours per week.

## **FA0000 Special Topics in Fine Arts**

A one-semester course; one to four credit hours. Directed readings, directed research, seminar or class in specific topics in discipline. The procedures to be followed and approval forms are available in the Registrar's office.

class hours per week

**Prerequisites: FP1001, FP1002, FP1004**

#### **FP1007 Fire Protection Hydraulics**

A one-semester course; three credit hours. Deals with incompressible fluids including fluid properties, principles of fluid statics, fluid flow system principles, pipe friction and heat loss, flow measurements, pumps and other hydraulic devices and machinery. Applications are related to fire protection systems such as sprinklers, standpipes, hoses, nozzles, pumper and water supply systems. Three class hours per week.

**Prerequisites: MA5511, SC5511, SC5512  
or permission of the program coordinator**

#### **FP1009 Chemistry of Hazardous Materials**

A one-semester course; three credit hours. Introduces organic chemistry followed by a study of the properties, derivation and uses of explosives and other dangerous materials such as flammable liquids, flammable solids, oxidizing materials, corrosive materials and compressed gases. Three class hours per week.

**Prerequisites: MA5511, SC5511, SC5512  
or permission of program coordinator**

#### **FP1011 Fire Company Officership**

A one-semester course; three credit hours. Treats the scope and functions of the fire company in the fire department. Topics discussed include the role of the fire service, departmental organization, administrative and management procedures, training, public relations, tactics, strategy and fire prevention. Three class hours per week.

**Prerequisites: FP1001, FP1002  
or permission of program coordinator**

#### **FP1012 Fire Fighting Tactics and Strategy**

A one-semester course; three credit hours. Reviews fire chemistry equipment and manpower, basic firefighting tactics and strategy, methods of attack and preplanning fire problems. Presents fire situations for study and analysis consistent with accepted fire fighting practices. Three class hours per week.

**Prerequisites: FP1001, FP1002 or  
permission of program coordinator.**

#### **FP1013 Fire Investigation and Arson**

A one-semester course; three class hours. Concerns the history, development and philosophy of fire investigation and detection including inspection techniques, gathering evidence, and development of technical reports. Treats the fundamentals of arson investigation, processing of criminal evidence and criminal procedures related to various general laws and statutes. Emphasis is placed on investigative methods and on the application and assistance of various scientific aids available to the fire service investigator. Three class hours per week.

#### **FP1015 Fire Protection Organization and Administration**

A one-semester course; three credit hours. Emphasizes the fire administrator's responsibility for total community fire protection problems, insurance and fire defenses, personnel and equipment, water supply, departmental and administrative

problems. Covers past and present management principles as well as how these principles, which business and industrial executives employ to successfully achieve their goals, can be applied in the management of fire service organizations. Three class hours per week.

**Prerequisites: FP1001, FP1002  
or permission of program coordinator**

#### **FP1016 Fire Prevention Codes and Standards**

A one-semester course; three credit hours. Discusses pertinent sections of building and fire codes of the state, applicable sections of federal regulations as well as codes, guides and standards promulgated by other national organizations; emphasizes codes as they relate to the storage and handling of hazardous substances, life safety and changing state and federal regulations in safety. Three class hours per week.

**Prerequisites: FP1001, FP1002  
or permission of the program coordinator**

## **French:Liberal Arts**

#### **FR4401/FR4402 Introductory French I and II**

A two-semester course; three credit hours per semester. For students who have not completed two years of secondary school French or the equivalent as determined by the college. An introduction to the basic grammatical patterns of French. Speaking, reading and writing in the French language. Three class hours per week.

#### **FR4451/FR4452 Intermediate French I and II**

A two-semester course; three credit hours per semester. For students who have completed two or more years of secondary school French or the equivalent as determined by the college, or who complete FR4401 and FR4402 successfully. A continued study of FR4401 and FR4402 language skills, emphasizing the development of reading ability. Three class hours per week.

#### **FR0000 Special Topics in French**

A one-semester course; one to four credit hours. Directed readings, directed research, seminar or class in specific topics in discipline. The procedures to be followed and approval forms are available in the Registrar's office.

## **Food Service Management**

#### **FS6601 Introduction to the Food Service Industry**

A one-semester course; four credit hours. An orientation to the food service industry; introduction to basic foods, equipment and tools; basic sanitation, safety and personal hygiene; fundamentals of cooking, baking and stewardship. Primarily lectures, demonstrations and field trips. Eight class hours per week.

#### **FS6602 Food Service Operations I**

A one-semester course; four credit hours. Preparation and

production of quantity foods including refrigeration, handling, storing and sanitation. Dining room procedures and management, purchasing, food costing, inventory control. Primarily a laboratory and food production approach. Eight class hours per week.

#### **FS6611 Food Service Operations II**

A one-semester course; four credit hours. Topics include menu planning and pricing, basic meats, fish and poultry, quantity control, merchandising and sales promotion, restaurant layout, equipment maintenance and repair. Primarily lectures and demonstrations. Eight class hours per week.

#### **FS6612 Food Service Operations III**

A one-semester course; four credit hours. Specialty foods, gourmet dishes, catering operations, food service operations, advanced quantity foods, preventative maintenance. Primarily a laboratory and food production approach. Eight class hours per week.

#### **FS6625 Food Service Management I**

A one-semester course; three credit hours. Management aspects of food service operations. Topics include selecting a location, selecting a clientele, food service equipment, training employees, food cost control and beverage control. Three class hours per week.

### **German:Liberal Arts**

#### **GM4401/GM4402 Introductory German I and II**

A two-semester course; three credit hours per semester. For students who have not completed two years of secondary school German or the equivalent as determined by the college. Audiolingual emphasis. Introduction to grammatical patterns, reading and writing. Three class hours per week.

#### **GM4451/GM4452 Intermediate German I and II**

A two-semester course; three credit hours per semester. For students who have completed two or more years of secondary school German or the equivalent as determined by the college, or who have completed GM4401 and GM4402. A continued study of the language emphasizing the development of reading ability. Three class hours per week.

#### **GM0000 Special Topics in German**

A one-semester course; one to four credit hours. Directed readings, directed research, seminar or class in specific topics in discipline. The procedures to be followed and approval forms are available in the Registrar's office.

### **Gerontology**

#### **GR6552 Retirement and Leisure Planning**

A one-semester course; three credit hours. This course is designed to include an investigation of the basic issues related to pre-retirement planning and a review of the planning techniques commonly employed in labor, business, education, government, etc... In addition, the course will focus on new issues of aging and the quality of life, a leisure framework for all ages, lifelong learning, and older people as contributors to society. Three class hours per week.

#### **GR6553 Concepts and Issues in Gerontology**

A one-semester course, three credit hours. This is an overview course covering the various disciplines; e.g., sociology, psychology, political science, etc. related to the field of aging. "Concepts and Issues" is geared toward those students wanting a general background in the field of aging. Some of the content to be covered will include new horizons in Gerontology, aging and the family, and a review of the special problems of the older adult. Three class hours per week.

#### **GR6554 Aging: Services and Resources**

A one-semester course; three credit hours. Programs, priorities and resources in aging. This is designed as an overview course focusing on major federal, state and local programs serving the older adult. Analyses of the Older Americans Act, the Administration on Aging, area agencies on aging, etc. will be included. Discussion of programs dealing with funding, aims, policy issues and new directions will be part of the course. Three class hours per week.



#### **GR6555 Economic Problems of Aging**

A one-semester course; three credit hours. Many of the problems of the older adult are related to inadequate incomes. In this course, both orthodox and other more innovative economic theories directly relevant to understanding the economic problems of the older population will be presented and used to evaluate current and proposed government policies. Specific policies to be considered are Social Security, age discrimination laws, private pension regulations and income tax exemptions. Three class hours per week.

### **GR6556 Law and Social Advocacy**

A one-semester course; three credit hours. This course concentrates on building advocacy skills that will prepare students to be advocates and to advance the legal concerns of people with special needs, including the elderly. The course integrates training in specific legal procedures with an understanding of the legal system and the roles one can play in it. A workshop format will give students opportunities to explore areas of special interest. Included are introduction to the concept of advocacy, techniques and methods of advocacy and self-help, providing advocate services, nursing homes and legal systems that affect property rights and civil rights. Three class hours per week.

### **GR6557 Working With The Aged**

A one-semester course; three credit hours. This course is designed to explore the salient issues, problems, barriers and techniques in relating to older adults and their families. The management of cases and a review of the special problems of older adults will be included. Patterns of community planning and facilities for older people are considered and illustrated with visits to facilities and planning and program agencies. Three class hours per week.

### **GR6561 Gerontology Practicum I**

A one-semester course; four credit hours. A practicum in selected community elder-serving agencies and facilities. Under supervision, students will render services to older adults, individually or in groups and have opportunity to follow up older adults in the home and community. Students shall be required to maintain a journal as specified by the practicum supervisor. Two class hours and eight practicum hours per week.

**Prerequisite: Enrollment in Gerontology program**

### **GR6562 Gerontology Practicum II**

A one-semester course; four credit hours. A continuation of Practicum I with a greater involvement in rendering of services to older adults. Students shall be required to maintain a journal as specified by the practicum supervisor. Two class hours and eight practicum hours per week.

**Prerequisite: Enrollment in Gerontology program**

### **GR6563 Gerontology Practicum III**

A one-semester course; four credit hours. A continuation of Practicum II with a more intensive involvement in rendering of services to older adults. Students shall be required to maintain a journal as specified by the practicum supervisor. Two class hours and eight practicum hours per week.

**Prerequisite: Enrollment in Gerontology program**

## **Government: Liberal Arts**

### **GV3312 Introduction to Political Science**

A one-semester course; three credit hours. A descriptive survey of the general principles of politics. Emphasis is given to the development of politics in society, the major political traditions and ideologies, and comparative governmental systems including institutions, political organization and behavior, and a select range of government policies. Three class hours per week

### **GV3313 The Federal Government**

A one-semester course; three credit hours. The structure, functions, and procedures of the legislative, judicial, and administrative branches of the Federal Government will be analyzed within the context of the Constitution of the United States. Emphasis will be given to the structure and function of the various branches of government as well as their interrelationships and the effects of other factors on their functions. Three class hours per week.

### **GV3314 State and Local Government**

A one-semester course; three credit hours. The structure, functions, politics, and problems of state and local government will be dealt with in an attempt to become aware of the functions and operations of state and local government. Special emphasis will be given to the identification and definition of problem areas in an attempt to better understand the issues involved as well as to deal with possible solutions. Three class hours per week.

### **GV3315 Civil Rights and Liberties**

A one-semester course; three credit hours. Course deals with the role of individual rights and liberties in American society within the framework of the United States Constitution. The paradox of freedom is essentially the core around which lectures, discussion and research will be conducted. It is advisable to take this course after having completed a course in federal government. Three class hours per week.

### **GV3343 Latin American Politics**

A one-semester course; three credit hours. A study of the common cultural backgrounds, values and social institutions of the countries of Latin America as they relate to the similarities in the organization and operation of Latin American political systems. Rather than treat the politics of Latin American nations country by country, politics of the region as a whole is emphasized. History of Latin America is recommended but not required. Three class hours per week.

### **GV0000 Special Topics in Government**

A one-semester course; one to four credit hours. Directed readings, directed research, seminar or class in specific topics in discipline. The procedures to be followed and approval forms are available in the Registrar's office.

## **History: Liberal Arts**

### **CD0301 East Asian Culture**

A one-semester course; three credit hours. A survey aimed at introducing the student to the principal features of traditional Chinese and Japanese culture through a topical treatment of some of the major social, political, intellectual, religious, economic and artistic trends which characterized traditional life in these two East Asian countries from the beginning of their respective histories to about 1800. Three class hours per week.

### **CD9575 History of Science and Technology**

A one-semester course; three credit hours. The study of the historical and philosophical development of science and technology and the practical consequences of discovery on the

human activities. The course focuses on the examination of the interplay of science and technology with their social and intellectual impact through the ages. The course may be applied towards a social science or a natural science requirement. Three class hours per week.

#### **HI9901 Western Civilization I**

A one-semester course, three credit hours. A survey of the major historical developments and trends in Western Civilization from the Fall of Rome to 1715, with emphasis on the formation and evolution of the social, political, economic, and cultural institutions of medieval and early modern Europe. Three class hours per week.

#### **HI9902 Western Civilization II**

A one-semester course; three credit hours. A survey of the major historical developments and trends in Western Civilization from 1715 to the present, with emphasis on the evolution of social, political, economic, cultural institutions in modern Europe. Three class hours per week.

#### **HI9903 Early Civilizations**

A one-semester course, three credit hours. A survey of the major historical developments and trends in the rise of the West from their origins in the Ancient Near East through Classical Greece and Rome to the decline and fall of the Roman Empire and the rise and triumph of Christianity. Attention is given to the formation and evolution of social, political, and economic institutions as well as intellectual, religious, and cultural achievements. Three class hours per week.

#### **HI9913 U.S. History I**

A one-semester course, three credit hours. A survey of United States history from colonial times through the Civil War. Traces the development of political, social, cultural and economic institutions. Three class hours per week.

#### **HI9914 U.S. History II**

A one-semester course, three credit hours. A survey of United States history from reconstruction to the present. Examines political, social, cultural and economic institutions of the U.S. Focuses on the extension of those institutions through imperialism and the challenges to them by the depression and two world wars. Three class hours per week.

#### **HI9915 American Civilization**

A one-semester course; three credit hours. Survey of American History from early colonization to the present. The focus is on the major developments, concepts, and themes in the American past; e.g., emigration and immigration, the Constitution, industrialization, patterns of living, American dreams. Three class hours per week.

#### **HI9916 Recent U.S. History**

A one-semester course; three credit hours. Seminar on American history since World War II. Directed readings and emphasis on the major areas of recent national concern such as the "welfare state," foreign affairs, changes in American society, the "urban crisis" in the post-war years, etc. In addition, projects, the intent of which is to depict some perspectives on contemporary America, are assigned. Three class hours per week.

#### **HI9951 19th Century Europe**

A one-semester course; three credit hours. An analysis of the major political, social, economic, ideological, intellectual and cultural movements of Western Europe from the time of the French Revolution up to the First World War. Three class hours per week.

#### **HI9952 20th Century Europe**

A one-semester course, three credit hours. An analysis of the major social, economic, political, ideological, intellectual and cultural trends of the 20th Century. Topics such as the search for collective security, revolutions, totalitarianism, the Cold War, the quest for European unity and Europe's relationship to the rest of the world will be explored. Three class hours per week.

#### **HI9953 Modern China and Japan**

A one-semester course; three credit hours. A survey of Chinese and Japanese history and related areas from around 1800 to the present. This course will begin by exploring the nature of traditional China and Japan on the eve of confrontation with the West, their contrasting response to Western power and ideas, and their attempts at reconciling traditional and modern ideas and institutions; it will then proceed to examine the emergence of nationalism in China and Japan, the triumph of the revolution in China and the establishment of the People's Republic, and the growth of Japan into a modern industrial state. Three class hours per week.

#### **HI9955 Minority Groups in America**

A one-semester course; three credit hours. Seminar on the contributions and difficulties of religious, racial, ethnic and other minority groups in the pluralistic American society from colonial times to the present. Particular attention will be given to the following groups: Catholic and Jewish, American Indian, Negro and Puerto Rican, and southern European and Oriental. Students will research, write and present individual reports. Three class hours per week.

#### **HI9956 American Foreign Policy**

A one-semester course; three credit hours. A survey of United States foreign affairs from revolutionary times to the present. Special emphasis on America's emergence as a world power and her relationship with Europe, Latin America and the Far East. Attention will be paid to the developing roles of the President and the State Department, Congress and international organizations in our foreign policy. Three class hours per week.

#### **HI9958 History of the Soviet Union**

A one-semester course; three credit hours. Study of Russia since the overthrow of the Czar in March 1917. Special emphasis is placed on the origin of Russian Communism, the changing nature of Communism under Lenin, Stalin, Krushchev and Brezhnev; Soviet foreign policy, especially since World War II. Three class hours per week.

#### **HI9959 History of Latin America**

A one-semester course; three credit hours. A survey of the historical development of Latin America from the pre-conquest societies to the present time. Emphasis is placed on the contributions made by the Indian traditions, the European conquerors, and the fusion of these two elements in the years following independence. The relationship between the United

States and Latin America will be given special attention. Three class hours per week.

#### **HI0000 Special Topics in History**

A one-semester course; one to four credit hours. Directed readings, directed research, seminar or class in specific topics in discipline. The procedures to be followed and approval forms are available in the Registrar's office.

### **Health Services**

#### **HS6601 Medical Terminology**

A one-semester course; three credit hours. Study of prefixes, suffixes; abbreviations; disease, operative and drug terms. Also included are terms related to all areas of medical science and hospital service, and para-medical specialities. Three class hours per week.

#### **HS6651 Introduction to Health Services**

A one-semester course; three credit hours. A survey course to provide the student with a comprehensive overview of the health care delivery system and its integration within the community. Some of the topics to be covered are orientation to health professions, organizational patterns of health care, financing of health care, proposed state and federal legislation and medico-legal standards. Field trips and guest lecturers will be utilized. Three class hours per week.

#### **HS2322 Human Services in the Community**

A one-semester course; two credit hours. An introduction to community agencies and services available to individuals with social, economic and mental problems. Emphasis will be placed on the role of these agencies as they relate to the field of human services. Two class hours per week.

#### **HS6652 Fundamentals of the Disease Process**

A one-semester course; three credit hours. Topics include causes of disease, cellular injury, inflammatory processes, neoplasms, metabolic disorders, endocrine imbalances, disturbances in blood and body fluids, infectious diseases, physical and chemical injuries, hereditary diseases and congenital defects. A survey of the basic process of disease, types of medication, diagnostic measures and types of treatment will be discussed relating to the following systems: integumentary, musculoskeletal, nervous, cardiovascular, respiratory, gastrointestinal, genitourinary and organs of special sense (eye and ear). Three class hours per week.

**Prerequisite: MR6605/MR6606 Medical Terminology I and II or permission of instructor and BI5519/BI5520 Anatomy and Physiology I and II or permission of instructor**

#### **HS6653 Health Education**

A one-semester course; three credit hours. Introduction to techniques in activity preparation for patients with physical limitations. Special emphasis in area of adapted sports programming and group exercise. Field study and observation. Three class hours per week.

#### **HS6655 Law of the Health Professions**

A one-semester course, application has been made for Continuing Education Units (CEU's) for nurses. A course for the

practitioner in any health profession encompassing licensure, regulation of professional conduct, relationship to patients and relatives, negligence, malpractice compensation and liability therefore. The content is directed to developing an awareness of impending legal disaster in the field of medicine, nursing and the other branches of health care. Emphasis will be placed on avoiding liability.

#### **HS6661 Therapeutic Recreational Skills I**

A one-semester course; three credit hours. Study of techniques in creative activity design. Consideration of methods of working with depressed, regressed and disoriented patients. Special emphasis given to individual and group participation in therapeutic recreation. Field study and observation. Three class hours per week.

#### **HS6662 Therapeutic Recreational Skills II**

A one-semester course; three credit hours. Study of advanced techniques in creative patient activities. Utilization of music, art and education as therapeutic tools. Field study and observation. Three class hours per week

**Prerequisite: HS6661**

#### **HS6681 Psychology of Health Care Delivery**

A one-semester course; three credit hours. The course is designed to help the health care worker develop organized personal assessment of attitudes through exploration of needs, emotional interactions and empathy relationships involved in health care delivery systems. Co-worker as well as patient interactions are emphasized. Topics include crisis intervention, caring, intimacy, sexuality, thanatology (death and dying), chronic care situations and the emotional problems involved in rehabilitation. Objective lecture theory will be stressed rather than subjective sensitivity exploration. Three class hours per week.

#### **HS6691 H.F.A.D. Internship I**

A one-semester course; three credit hours. Practicum supervised by recreational therapists in clinical facility. Special instruction in all phases of rehabilitation procedures. Opportunity to engage in direct therapeutic recreational activity with patients in facility. Nine clinical and twelve practicum hours per week.

#### **HS6692 H.F.A.D. Internship II**

A one-semester course; three credit hours. Advanced practicum in recreational therapy supervised in clinical facility by professional staff. Opportunity to engage in activity planning and implementation in patient's rehabilitation program. Nine clinical and twelve practicum hours per week.

## **Humanities : Liberal Arts**

### **HU2000 Humanities: The Shape of Now**

A one-semester course; three credit hours. A study of the past in the present. An interdisciplinary focus on the behavior of Man starting with a study of contemporary social/political, biological and spiritual/ethical attitudes. The course will consider the development of each up to the present. Sequence of topics: The Major Problems of Today; The Origin of Man; The Emergence of a Civilization. Format: a colloquium involving a natural scientist, a sociologist/anthropologist, a political scientist/historian and a fine arts/philosophy professor. Three class hours per week.

### **HU2001 The Year 2001: The Shape of the Future**

A one-semester course; three credit hours. Taught by a team of instructors in an interdisciplinary approach, the course relates the natural sciences, humanities and social sciences to the future possibilities for man. Students will also be involved in helping to construct a future utopia by designing that aspect of the utopia which interests him, thus enabling the student to interpret emerging values, attitudes and influences which are likely to shape future society. Three class hours per week.

### **HU3111 Humanities I**

A one-semester course; three credit hours. An interdisciplinary course for students in the Discovery Program only which focuses on man: cosmological, philosophical, biological, sociological, political and ecological. Sequence of topics: Man and the Cosmos, Biological Man, Man in Society, Man the Politician, Man and his Environment. Format: a colloquium involving a natural scientist, a social psychologist and an historian-political scientist. Three class hours per week.

## **Italian: Liberal Arts**

### **IT0000 Special Topics in Italian**

A one-semester course; one to four credit hours. Directed readings, directed research, seminar or class in specific topics in discipline. The procedures to be followed and approval forms are available in the Registrar's office.

## **Law Enforcement**

### **LE3601 Concepts of Criminal Law**

A one-semester course; three credit hours. A core Criminal Justice course. The substantive law of crimes, its historical development and philosophy. This course includes classification of crime, definitions and elements of specific crimes, parties to a crime and defenses of a crime. Three class hours per week.

### **LE3602 Law Enforcement Planning and Management**

A one-semester course; three credit hours. Consideration of police problems at the administrative level including coordination of all branches of a police department. An evaluation of line, staff and auxiliary functions and their interrelationship. The purpose, need and scope of planning in the police operation including staffing, collection of data and use of data processing. Three class hours per week.

### **LE3603 Introduction to Criminal Justice**

A one-semester course; three credit hours. A core Criminal Justice course. The history and philosophy of administration of justice in America; recapitulation of the system, identifying the various sub-systems, role expectations and their interrelationships, theories of crime, punishment and rehabilitation, ethics, education and training for professionalism in the system. Three class hours per week.

### **LE3605 Comparative Criminal Justice Systems**

A one-semester course; three credit hours. This course will acquaint students with criminal justice administration, procedures and methods of enforcement and for operations in other countries on a comparative basis. Countries to be considered include the United States, Canada, Britain, France and selected Asian and African countries. Three class hours per week.

### **LE3606 Community Relations in Criminal Justice**

A one-semester course; three credit hours. A core Criminal Justice course. A sociological and psychological approach to criminal justice. A realistic analysis of the many variables contributing to negative relations between the criminal justice system and the community. Positive suggestions will be presented for necessary changes that can help update police procedures to be reflective of and responsive to all the citizens in a democratic society. Three class hours per week.

### **LE3650 Patrol Functions**

A one-semester course; three credit hours. Deals with the psychological development of the uniformed patrol officer as it relates to his professional career. It will also cover numerous practical areas of patrol, such as: various types of patrol, proper vehicle operations; preliminary investigative techniques and all aspects of contacts with citizens including proper arrest and search procedures. Three class hours per week.

### **LE3653 Criminal Investigation**

A one-semester course; three credit hours. An introduction to field investigation, including conduct at the crime scene, interview and interrogation of witnesses and suspects, use of informants and techniques of surveillance. Emphasis is placed on special investigative techniques and on the court procedure of the police case. Three class hours per week.

**Prerequisite: LE3601, LE3654**

### **LE3654 Procedural Law**

A one-semester course; three credit hours. A core Criminal Justice course. Consideration of vital constitutional and statutory concepts with emphasis on the fourth, fifth, sixth and fourteenth amendments. Specific procedural matters especially affecting law enforcement officers will include arrest, search and seizure, stop and frisk, and interrogations. Three class hours per week.

### **LE3656 Introduction to Criminalistics**

A one-semester course; three credit hours. The organization, capabilities and use of a criminalistics laboratory, including demonstrations of identification and comparison of evidential materials. Three class hours per week.

**Prerequisite: LE3653**

### **LE3658 Organized Crime in the United States**

A one-semester course, three credit hours. The history of organized crime in the United States, delineating its effects on our society, the types of businesses it has penetrated and methods of combatting this serious problem. Three class hours per week.

### **LE3662 Police Records and Communication**

A one-semester course; three credit hours. A course providing a comprehensive familiarization with types and functions of police records, the role of research in the planning process, and establishment and administration of a record bureau in enforcement agencies. Forms, records, analysis and report-writing are discussed. The role and use of the uniform crime reporting system, of forms and essential data required, of electronic data processing and of the computer is identified as it relates to police planning and operations. Three class hours per week.

### **LE3666 Traffic Administration and Enforcement**

A one-semester course; three credit hours. Examines the history, development and economics of the modern transportation system. The role of federal, state, and local government in coping with the traffic problem in today's society is discussed. A description and evaluation is offered regarding the use of modern business methods and technology in traffic accident investigation and reporting, traffic accident records and data processing, and selective traffic enforcement. Three class hours per week.

### **LE3667 Crisis Intervention**

A one-semester course; three credit hours. A core Criminal Justice course. Crisis theory, the management of interpersonal conflict, and effective techniques for crisis intervention. Specific crisis situations to be considered include family disputes, forcible rape, child abuse and potential suicide cases. Three class hours per week.

**Prerequisite: PS1101 and SO3331**

### **LE3670 Senior Seminar**

A one-semester course; three credit hours. Forum for criminal justice students focusing upon special issues in criminal justice. A primary emphasis will be the student's development of a "Senior Paper" which analyzes an agency in light of course work to date. Three class hours per week.

### **LE3672 Field Practicum Experience**

A one-semester course; three credit hours. Course for preservice students. Planned program of observation in selected criminal justice agencies representing the major components of the system. The student will select an agency provided by the coordinator and assist in activities deemed appropriate by the agency. Students shall be required to maintain a journal as specified by the field supervisor. One class hour and eight field hours per week.

**Prerequisite: Full-time enrollment in the Day Division's Criminal Justice program. Student must be in his/her fourth semester.**

## **Library Science**

### **LS0121 Introduction to Library Services**

A one-semester course; three credit hours. This course will investigate the history of libraries, the role of the library in American society, the organizational structure of the library, media services available, different types of libraries. The course will attempt to familiarize students with the day to day functions of the library as well as with library resources, both print and non-print. Three class hours per week.

### **LS0132 Creative Use and Production of Audio/Visual Media**

A one-semester course; three credit hours. Application of the systems approach to education in the selection, implementation and evaluation of various types of audio/visual media. Instruction in the design and production of overhead visuals, 8mm and 35mm photographic presentations, audio and video tapes, basic graphics and filmographic techniques. Development of skills in the operation and maintenance of equipment. Three class hours per week.

### **LS0131 Audio/Visual Media Workshop [Lab]**

A one-semester course; one credit hour. Lab workshop giving instruction in the production and use of film, filmstrips, audio tapes, slides, etc. and in the operation and maintenance of hardware such as slide projectors, 16mm projectors, tape recorders, etc. One two-hour lab per week.

### **LS0132 Childrens Literature for Elementary & Public Librarians**

A one-semester course; three credit hours. A course in literature for children geared for the librarian in an elementary school or public library situation. The course will cover the history of writing and illustrating for children, contemporary trends in children's books, print and non-print selection tools as well as coverage of basic reference sources. Caldecott and Newbery books will be considered as well as all genres of children's literature - fiction, poetry, informational books, etc. One three-hour class meeting per week.

### **LS0134 Field Practicum I**

A one-semester course; three credit hours. The Library Assistant or Library Associate student will gain practical experience by working each week in a school, public, college or industrial library. Under the supervision of professional library staff, the student will be given the opportunity to perform a number of different tasks which will reinforce and supplement the skills already learned in previous course work. Students will meet each week to discuss areas of common concern and interest. One class hour and eight practicum hours per week.

### **LS0135 Field Practicum II**

A one-semester course; three credit hours. This course will provide a second practical experience for the Library Assistant and Library Associate student. The placement in Practicum II will vary from the type of library the student worked in during Practicum I. For example, if the first experience was in a public library, the second experience might be at a school library, etc. One class hour and eight practicum hours per week.

### **LS0141 Library Technical Services**

A one-semester course; three credit hours. This course will cover essential technical services performed in public and school libraries and will equip the student with a variety of skills. These skills will include acquisition procedures, print and non-print materials processing, inventory procedures, circulation procedures, record keeping and filing. Three class hours per week.

### **LS0150 Senior Seminar**

A one-semester course; three credit hours. This seminar course provides a forum for group discussion of theoretical and practical approaches to library work. It will include an analysis of previous course work and practicum experiences. Guest lecturers from the library field and field trips will be included. Three class hours per week.

## **Mathematics**

### **MA0100 Introduction to Technical Mathematics**

A one-semester course; no credit hours. A course for students without proper prerequisites who wish to enroll in Northern Essex technical programs or in nursing. It is intended for those who need to acquire a basic knowledge of mathematics for use in their particular programs. The general topics covered are an arithmetic review, algebra and basic topics from geometry. Three class hours per week.

### **MA0500 Mathematics for Early Childhood Education**

A one-semester course; three credit hours. A mixture of teaching methods and content, this course explores various mathematical concepts developed during early childhood. Topics include shape, pattern recognition, sorting, graphing, comparing, measuring, reasoning, counting, number, and place value. Emphasis is given to concrete activities and materials which promote or help diagnose understanding of these activities among children. The course may also include a review of personal arithmetic skills and a term project requiring activity with children. Three class hours per week.

### **MA0501 Developmental Mathematics**

A one-semester course; three credit hours. A review for students in the Discovery Program only of arithmetic and an introduction to algebra, including formula evaluation, linear and quadratic equations, graphs, set theory, etc. This course does not satisfy any of the degree requirements for the associate degree in Liberal Arts. Five class hours per week.

### **MA0550 Basic Algebra: a lab course**

A one-semester course; one credit hour. The course is designed as an introduction for students with a limited background in the basic skills of algebra. Topics include the set of integers, expressions, solution of equations, factoring, radicals, graphing and set theory. The content is structured as a prerequisite to the three-credit course, College Algebra. All students must attend the individualized lab sessions a minimum of two hours per week. However, the number of extra hours that any particular student spends in the lab is dependent on his beginning skills level.

**Prerequisite: Basic arithmetic competency**

### **MA0551 Basic Geometry: a lab course**

The course is designed as an introduction for students with a limited background in the basic concepts of Geometry. Topics include lines, triangles, circles, areas of plane figures, parallelograms and volumes. All students must attend the individualized lab sessions a minimum of two hours per week. However, the number of extra hours that any particular student spends in the lab is dependent on his beginning skills level.

### **MA5506 Statistics**

A one-semester course; three credit hours. Set theory approach to probability. Descriptive statistics. Probability distributions. Sampling inferences from statistics. Hypothesis testing. Linear regression and correlation. Three class hours per week.

**Prerequisite: MA5520**

### **MA5508 Elementary Functions**

A one-semester course; three credit hours. Set theory approach to polynomial, rational, algebraic, exponential, logarithmic and trigonometric functions. Analytic geometry. Three class hours per week.

**Prerequisite: MA5518 or equivalent**

### **MA5511 Survey of Basic Mathematics**

A one-semester course; three credit hours. The course provides a review of mathematical fundamentals through an examination of basic number systems and algebra. An introduction to statistical techniques is presented from a practical viewpoint. Emphasis is placed on problem solving. This course does not satisfy any of the degree requirements for the associate degree in Liberal Arts. Three class hours per week.

### **MA5512 Mathematics for Elementary Education**

A one-semester course; three credit hours. A mixture of content and teaching methods, this course explores in detail various mathematical concepts which are normally taught in elementary school. Emphasis is given to concrete materials and to applications of mathematics to the real world. The course may also include a review of personal arithmetic skills and a term project requiring activity with children. Three class hours per week.

### **MA5518 College Algebra**

A one-semester course; three credit hours. The course is designed primarily for students pursuing a career in any field that requires further preparation in mathematics. A detailed examination of algebraic fundamentals is presented with the emphasis on preparing the student for Elementary Functions or other courses requiring a strong background in algebra. Three class hours per week.

**Prerequisite: MA0550 or equivalent**

### **MA5520 Liberal Arts Mathematics I**

A one-semester course; three credit hours. The course is designed to develop an appreciation of the nature of mathematics. This will be done by exploring some of the significant and surprising mathematical concepts that are part of man's cultural heritage and discovering the correlation between mathematics and other areas of study. The student will participate in the creation of mathematics through the study of topics such as mathematical logic, set theory and other mathematical systems, developing an understanding of the importance of mathematics to the world today. Three class hours per week.

### **MA5520 Liberal Arts Mathematics I [Review Option]**

A one-semester course; three credit hours. The course is fundamentally the same as Liberal Arts Mathematics I, with considerable emphasis placed upon examining the mathematical properties and operations of the basic number systems and elementary algebra. In this way the student can refresh his background while at the same time completing the requirements for Liberal Arts Mathematics I. Five class hours per week.

### **MA5525 Liberal Arts Mathematics II**

A one-semester course; three credit hours. The objectives are similar to those of Liberal Arts Mathematics I. Liberal Arts

Mathematics II is designed to allow the student to explore some of the interesting and useful aspects of mathematics. The instructor will choose topics from a wide variety of areas such as probability, statistics, topology, fourth dimension, philosophy of mathematics and computer programming. Three class hours per week.

**Prerequisite: MA5520 or MA5518**

### **MA5531 Calculus I [Liberal Arts]**

A one-semester course; four credit hours. The integral and derivative. Differential calculus of polynomial, rational, exponential, logarithmic and trigonometric functions, with an emphasis on problem solving; antiderivatives. Four class hours per week.

**Prerequisite: MA5508 or equivalent**

### **MA5532 Calculus II [Liberal Arts]**

A one-semester course; four credit hours. Differential functions, chain rule, methods of integration, implicit and inverse functions. Limits, applications of integration to problem solving. Volume, theory of curves. Four class hours per week.

**Prerequisite: MA5531 or equivalent**

### **MA5533 Introduction to Statistics**

A one-semester course; three credit hours. Emphasis on the role of statistics in the application of the scientific method. Descriptive statistics and statistical inference. Variation, central tendency and dispersion. Finite sample space. Random variable. Inference. Linear regression and correlation. REQUIRED FOR ALL STUDENTS IN THE COMPUTER TECHNOLOGY PROGRAM. Three class hours per week.

**Prerequisite: MA5621 or MA5611 and MA5612**

### **MA5611/MA5612 Finite Mathematical Models I and II**

A two-semester course; three credit hours per semester. Topics include: logic, set theory, vectors and matrices, probability, Markov chains, linear programming, game theory, non-linear functions, iteration and approximation methods, and monte carlo methods. Three class hours per week.

### **MA5613 Mathematics of Finance**

A one-semester course; three credit hours. The mathematics used in business transactions. Three class hours per week.

### **MA5621 Algebra and Trigonometry**

A one-semester course; four credit hours. For students enrolled in a technology curriculum. A complete review of algebra. Introduction to trigonometry. Three class hours and two one-hour problem-solving sessions per week.

**Prerequisite: two years of high school algebra**

### **MA5622 Advanced Algebra and Trigonometry**

A one-semester course; four credit hours. For students enrolled in a technology curriculum. Emphasis on the use of algebra, trigonometry and graphics in the solution of technical problems. An introduction to the concepts of rate of change and summation of areas. Three class hours and two one-hour problem-solving sessions per week.

**Prerequisite: MA5621**



#### **MA5641 Mathematics of Business**

A one-semester course; three credit hours. A study of the mathematics of percentage, interest, discounts, depreciation, insurance, payroll, and statistical averages. Three class hours per week.

#### **MA5651 Advanced Technical Mathematics I**

A one-semester course; four credit hours. For students enrolled in a technology curriculum. The course covers basic analytical geometry, differentiation, integration, and the mathematics of transcendental functions, with applications to maximum-minimum, related rates, acceleration, area, volume, and curve sketching problems. Four class hours per week.

**Prerequisite:** MA5622

#### **MA5652 Advanced Technical Mathematics II**

A one-semester course; three credit hours. The course covers integration by parts, partial fractions and trigonometric substitution. Elements of Boolean Algebra and Statistics are presented. Course also covers power series expansion and elementary differential equations with electronic applications.

**Prerequisite:** MA5651 or equivalent

#### **MA5661 Advanced Trigonometry and Analytic Geometry**

A one-semester course; four credit hours. Review of the fundamentals of algebra and trigonometry. Introduction to advanced algebraic concepts, trigonometric identities, basic statistics, complex variables, analytic geometry and the basic forms of differentiation and integration. Three class hours and one two-hour problem-solving session per week.

**Prerequisite:** Two years of high school algebra

#### **MA5671 Business Statistics**

A one-semester course; three credit hours. The use of statistical methods in the management of business. Three class hours per week.

#### **MA5673 Quantitative Methods for Business/ Social/Life Sciences**

A one-semester course; three credit hours. Topics included in this algebra-based course are matrices, linear systems of equations and inequalities, linear programming, probability, decision theory and statistics. Special emphasis is given to applications in business, social and life sciences. Three class hours per week.

**Prerequisite:** MA5518 or two years of high school algebra

#### **MA5675 Calculus I for Business/Social/Life Sciences**

The first course in a two-semester sequence; three credit hours. Topics included in this algebra-based course are polynomial, exponential and logarithmic functions, limits and differentiation. Special emphasis is given to applications in business, social and life sciences. Three class hours per week.

**Prerequisite:** MA5518 or two years of high school algebra. Some geometry would also be helpful.

#### **MA5676 Calculus II for Business/Social/Life Sciences**

The second course in a two-semester sequence; three credit hours. A continuation of MA5675. This course includes techniques of integration, differential equations and multivariable functions. Three class hours per week.

**Prerequisite:** MA5675

#### **MA5683 Calculus I**

A one-semester course; four credit hours. The fundamental ideas and applications of both differential and integral calculus. Differentiation and integration of polynomials, algebraic functions and transcendental functions. Maxima, minima, concavity and curve tracing. Areas and volumes by integration; related rates. Four class hours per week.

**Prerequisite:** MA5661

#### **MA5684 Calculus II**

A one-semester course; four credit hours. The calculus of scalar and vector products, solid analytical geometry, partial derivatives, series expansions, deMoivre's Theorem, L'Hospital's Rule, etc. Four class hours per week.

**Prerequisite:** MA5683

#### **MA5685 Differential Equations**

A one-semester course; four credit hours. Fundamentals of ordinary linear differential equations, LaPlace Transforms, numerical methods of solutions, etc. Four class hours per week.

**Prerequisite:** MA5684

#### **MA0000 Special Topics in Mathematics**

A one-semester course; one to four credit hours. Directed readings, directed research, seminar or class in specific topics in discipline. The procedures to be followed and approval forms are available in the Registrar's office.

## **Business Management**

### **MG6551 Industrial Management**

A one-semester course; three credit hours. Overview of manufacturing operations. All aspects of the production function are discussed: capital investment, assembly-line operation, plant location, product design, time study, purchasing and other topics. Three class hours per week.

### **MG6652 Time and Motion Study**

A one-semester course; three credit hours. The course deals with the application of methods improvement and work measurement techniques. The use of the stop watch, work sampling and operations charts in terms of application to standard systems. Three class hours per week.

### **MG6653 Industrial Purchasing**

A one-semester course; three credit hours. The course provides a comprehensive knowledge of modern purchasing practices. It combines analysis of the fundamental purchasing principles with analytical descriptions of the latest developments and techniques. The fundamentals of the buying process are related to the new expanded role of the purchasing department. The student is given the opportunity to test his understanding of what has been covered by the inclusion of case problems drawn from contemporary industry. Three class hours per week.

### **MG6676 Personnel Management**

A one-semester course; three credit hours. Principles and human relations problems involved in the administration of personnel. Topics include job analysis and specification, recruitment, selection and training, job evaluation, supervision of employees, and salary and wage administration and labor relations. Three class hours per week.

### **MG6686 Small Business Management**

A one-semester course; three credit hours. This course will cover the challenges and objectives of owning a small business. It will identify the types of individuals who ought to consider self-entrepreneurship as well as what type of business one should enter. Full planning and executing of the start-up of a small business and/or entering an existing business. Planning, organizing, directing and controlling the activities of the firm. Three class hours per week.

## **Mental Health**

### **MH2001 Management of Community Residence: Health, Safety and Nutrition**

A one-semester course- three credit hours. An in-depth analysis of how best to provide for the medical, nutritional and safety needs of individuals in community residence. Topics such as activity of daily living skills; accident prevention; use of emergency first aid techniques; food preparation, purchasing and menu planning as it relates to normal nutrition; the role of the house manager in detecting problems or illness; working with community resources in health problems and handling chronic health problems of residents. Three class hours per week.

**Prerequisite: Enrollment in Mental Health  
Technology or House Manager program**

### **MH2111 Introduction to Mental Health**

A one-semester course; three credit hours. An introduction to the history of psychiatry, current trends in mental health and mental retardation, the mental health team, prevention of mental illness, and the role of the mental health technician. Consideration will be given to the diagnostic evaluation, establishing contact with patients and families and techniques of interviewing. Three class hours per week.

### **MH2133 Observation & Recording of Mental Health Programs**

A one-semester course; one credit hour. A preliminary investigation of programs in mental health, in varied institutional settings. Defined areas of mental health and mental retardation will be observed and recorded. These observations will be discussed in seminars held throughout the semester. Four practicum hours per week.

**Prerequisite: Enrollment in Mental Health  
Technology or House Manager program**

### **MH2134 Mental Health Practicum I**

A one-semester course; four credit hours. A rotating practicum in selected community psychiatric and mental retardation facilities, social agencies and school settings. Under supervision, students will give services to patients/clients individually or in groups and have opportunity to follow up patients/clients in the home and community. Twelve practicum hours and one class hour per week.

**Prerequisite: MH2111 and MH2133**

### **MH2143 Mental Health Practicum II**

A one-semester course; four credit hours. A continuation of Practicum I but with a greater involvement in patient care and services. Twelve practicum hours and one class hour per week.

**Prerequisite: MH2134**

### **MH2144 Mental Health Practicum III**

A one-semester course; four credit hours. A continuation of Practicum II with a more intensive involvement in mental health/human service facilities. Twelve practicum hours and one class hour per week.

**Prerequisite: MH2143**

### **MH2145 Mental Health Practicum in Residential Services I**

A one-semester course; four credit hours. A practicum in selected community residences for the mentally ill, emotionally disturbed and mentally retarded. Under supervision, students will give direct services to residents individually or in groups and assist residents in money management, house management and household maintenance. One class hour and twelve practicum hours per week.

**Prerequisite: Enrollment in Mental Health  
Technology or House Manager program**

### **MH2146 Mental Health Practicum in Residential Services II**

A one-semester course; four credit hours. A continuation of Practicum I but with a greater involvement in activities of a house manager. One class hour and twelve practicum hours per week.

**Prerequisite: MH2145**

### **MH2147 Group Dynamics**

A one-semester course; three credit hours. Course aims to help students to realize their potential for growth more fully, and increase their ability to work effectively with others in a variety of situations. Students will learn how groups work and how individuals function within groups by forming a group for this purpose. Phases of group development, communication and group performance are experienced and discussed. Three class hours per week.

**Prerequisite: PS1101 or SO3321 or PS1351 and enrollment in Mental Health Technology or House Manager program**

### **MH2155 Modalities of Treatment**

A one-semester course; three credit hours. The management of special problems with adults and children will become the central focus of this course. The course will explore various systems of personality and the application of these systems to practice; individual therapy; group therapy, family therapy; behavior modification and chemo-therapy. Special emphasis will be given to the role of the mental health technician in treatment. Three class hours per week.

**Prerequisite: MH2111 and MH2133**

### **MH2156 Behavior Management and Techniques**

A one-semester course; three credit hours. This course seeks to acquaint students with the application of principles of instrumental learning theory to the problems of human behavior. Focus will be on an approach to patient management problems and practical techniques for helping patients improve functioning in the community. Content will include the analysis of behavior, reinforcement of behavior, point or token system, shaping process, ethical issues and future trends in behavior therapy. Three class hours per week.

**Prerequisite: Enrollment in Mental Health Technology or House Manager program**

### **MH2166 Seminar in Mental Health**

A one-semester course; three credit hours. This seminar course allows for group discussion of theoretical and practical approaches to patient-client care. Analysis of practicum experiences; preparation for service in various agencies; and graduate's identity as a mental health technician. Three class hours per week.

**Prerequisite: MH2134, MH2143 and MH2144**

### **MH2170 Alcohol and Drug Abuse**

A one-semester course; three credit hours. This course is designed to generate an understanding of alcohol use, drug use, misuse, addiction and personal and social consequences. There will be discussion of community approaches to drug abuse, state and federal legislation, etiology, symptomatology and current treatment modalities. The primary goal of this course is to provide future and/or present personnel in the field with basic information needed to provide services to this type of client and family. Three class hours per week.



## **Marketing**

### **MK6678 Principles of Marketing**

A one-semester course; three credit hours. Introduction to marketing with emphasis placed on the basic functions and the channels of distribution. The consumer, the market area, and the problems and policies of pricing the product. Three class hours per week.

### **MK6679 Advertising**

A one-semester course; three credit hours. Analysis of buying motives and the development of various advertising appeals. Planning, budgeting and testing of phases of the program and the several advertising media. Three class hours per week.

### **MK6680 Retailing**

A one-semester course; three credit hours. Basic elements of retail merchandising. Types and organization of retail outlets. Buying, pricing, dollar and unit stock control, sales promotion, and expense budgets. Three class hours per week.

### **MK6681 Salesmanship**

A one-semester course; three credit hours. Fundamentals of salesmanship by studying the behavioral aspects of the persuasion process; a systematic approach to selling which the student can use to develop the techniques which fit his own personality and particular situation. Three class hours per week.

## **Medical Record Technology**

### **MR6601 Medical Record Science I**

A one-semester course; three credit hours. The beginning of a series of courses designed to instruct students in the theory and principles of Medical Record Technology. Subjects covered are History of Medical Records, orientation to medical record field; admitting areas; Medical Record forms and content; Medical Record formats (e.g., Problem-Oriented Medical Record), Numbering and Filing Systems. Two class hours and two lab hours per week.

### **MR6602 Medical Record Science II**

A one-semester course; three credit hours. Study of basic principles of compiling statistics for hospitals and other medical facilities. Topics include the daily census; analysis of hospital services; monthly, annual and special reports, methods for recording vital statistics, basic principles in the classification of diseases and operations according to the International Classification of Diseases; methods of maintaining the physicians' index; birth, death and emergency registers, and the techniques of assisting medical staff in research projects. Two class hours and two laboratory hours per week.

**Prerequisite: MR6601**

### **MR6605 Medical Terminology I**

A one-semester course; two credit hours. A study of basic prefixes, suffixes, roots, abbreviations, symptomatic, disease, operative, and drug terminology. Terms will be taught by anatomical system with lectures on the anatomy of the system included. The following systems are covered: Integumentary, Musculo-Skeletal, Neurological-Psychiatric, Cardiovascular, Blood and Blood Forming organs. Two class hours per week.

### **MR6606 Medical Terminology II**

A one-semester course; two credit hours. A study of prefixes, suffixes, roots, abbreviations, symptomatic, disease, and operative terminology of the following systems are covered: Digestive, Respiratory, Uro-Genital, Maternal and Antenatal, Endocrine, Organs of Special Sense, and Systemic Diseases. Also selected laboratory terms are covered. Two class hours per week.

**Prerequisite: MR6605**

### **MR6651 Medical Record Science III**

A one-semester course; three credit hours. Course includes the study of principles of law as related to patient care and medical records; state and federal legislation regulating health care facilities or the delivery of health care services; study of medical staff structure within the hospital and medical staff committees; study of health accrediting agencies; Medicare, Medicaid, quality assurance programs, P.S.R.O. Two class hours and one two-hour laboratory period per week.

**Prerequisite: MR6601, MR6602**

### **MR6653 Medical Record Science IV**

A one-semester course; two credit hours. Study of health information systems and accrediting agency standards in the long term and ambulatory care setting; course is integrated with Directed Practice II (MR6668). Two class hours per week. MUST BE TAKEN WITH MR6668.

### **MR6661 Transcription I [Medical Record]**

A one-semester course; one credit hour. Directed Practice experience in operation and care of transcribing equipment; techniques of transcription and transcription of correspondence, minutes of meetings; basic history and physical examinations, reports of specialty departments (e.g., x-ray, E.K.G., etc.) of moderate difficulty. Spelling and quality of transcription emphasized rather than quantity. Four class hours per week.

**Prerequisites: MR6605, MR6606  
Typing 45 wpm with 5 errors or less**

### **MR6662 Transcription II [Medical Record]**

A one-semester course; one credit hour. Directed practice experience in transcribing dictated medical reports (e.g., history and physical examination, autopsy, clinico-pathological conference reports, consultations, operative notes, and clinical resumes); use of magnetic card selective typewriter is included. Reports are covered by medical or surgical specialty (e.g., orthopedic, obstetrical, etc.). Four class hours per week.

**Prerequisite: MR6661**

### **MR6667 Directed Practice I [Medical Record]**

A one-semester course; four credit hours. Supervised practice in the medical record department of a community hospital affiliated with the Medical Record Program. Students participate in all phases of medical record systems and become fully acquainted with the required medical record procedures of a local hospital. Comparison of systems is provided by class field trips to other cooperating hospitals and reports prepared by students. 16 hours per week. (Two hospital working days per week.)

**Prerequisites: MR6601, MR6602, MR6605, MR6606**

### **MR6668 Directed Practice II [Medical Record]**

A one-semester course; three credit hours. Supervised practice in health information systems of extended care facilities, psychiatric facilities, ambulatory care facilities and in related health care industries; workshop, lecture, discussion group sessions on various aspects of health information systems in various types of health care facilities. 10 hours per week. MUST BE TAKEN CONCURRENTLY WITH MR6653.

**Prerequisite: MR6667**

## **Music: Liberal Arts**

### **MU7090 Music Reading, Notation and Ear Training**

A one-semester course; three credit hours. Music reading is introduced through the practical experiences of tapping, singing and playing. Notation includes study of rock, folk, jazz and classical. Ear training is accomplished by analytical listening to all major styles of music. The recognition of clefs, pitches, intervals, scales, chords, rhythms and metric patterns is thus developed. Three class hours per week.

**Prerequisite: MU7095 simultaneously  
or approval of the instructor**

### **MU7091 Introduction to Music**

A one-semester course; three credit hours. Music of European, American and non-Western cultures from classical to rock will

be studied. Exposure to various styles and forms of music, expansion of listening perception and knowledge of the materials and sociological aspects of music. Three class hours per week.

#### **MU7093 Twentieth Century Music**

A one-semester course; three credit hours. Trends in contemporary music beginning with Debussy and including electronic and other avant-garde music, music for theatre and film, and related social and political trends of this century. Three class hours per week.

#### **MU7095 Introduction to Applied Music: Skills and Professions**

A one-semester course; three credit hours. The course is designed for the student interested in finding out whether he would like a career in or associated with music, regardless of any musical background. Exploration of performance, improvisation, composition, instrument construction and maintenance, education, therapy, publishing, business and other professional areas. Development of marketable skills. Guest speakers and field trips. Three class hours per week.

#### **MU7097 Performance Ensemble I**

A one-semester course; three credit hours. Ensembles of all sizes in rock, folk, jazz and classical music organized for the purpose of gaining experience in preparing and performing music before audiences. Video tape and reel-to-reel recordings of class performances are made for study purposes. Students enrolling must be capable of performing on a musical instrument or as a singer. One class and four laboratory hours per week.

#### **MU7098 Performance Ensemble II**

A one-semester course; three credit hours. A continuation of MU7097 (see description of Performance Ensemble I) with the requirement of further progress and musical development. One class and four laboratory hours per week.

#### **MU0000 Special Topics in Music**

A one-semester course; one to four credit hours. Directed readings, directed research, seminar or class in specific topics in discipline. The procedures to be followed and approval forms are available in the Registrar's office.

therapeutic and supportive care, nursing home finance, and community resources and relationships. Three class hours per week.

**Prerequisite: NH6613**

#### **NH6651 Principles of Activity Coordination in Nursing Homes**

A one-semester course; three credit hours. This course is designed to provide training in the planning and implementing of meaningful patient activities in extended care facilities, including recreational, spiritual, educational and work-oriented activities. Four class hours per week.

#### **NH6670 Practicum in Nursing Home Administration**

A one-semester course; four credit hours. A practicum in selected community nursing homes and related facilities. Under supervision, students will have the opportunity to become familiar with the various phases of nursing home administration practice. Students shall be required to maintain a journal as specified by the practicum supervisor. Two class hours and eight practicum hours per week.



## **Nursing Home Administration**

#### **NH6613 Nursing Home Administration I**

A one-semester course; three credit hours. An introduction to the management of long-term-care facilities. Topics include general considerations of environmental health, safety, and sanitation; health and safety regulations; administration in a long-term-care context, including departmental organization and management, and support staff organization and relationships. Three class hours per week.

#### **NH6614 Nursing Home Administration II**

A one-semester course; three credit hours. Topics include principles of medical care, personal and social care, the psychology of patient care, interdisciplinary interaction,

## **Nursing**

#### **NS6601 Nursing I - Introduction to Nursing**

A one-semester course; eight credit hours. This course is designed to introduce the student to the homeostatic framework and to the basic skills necessary to render safe and effective nursing care. Concepts of nutrition, pharmacology, psycho-social skills, and the preventive, therapeutic, and rehabilitative aspects of care are integrated throughout the course. Four class hours and twelve clinical laboratory hours per week.

**Prerequisites: EN4401, BI5519, PS1101 must be taken prior to or concurrent with Nursing I, NS6601.**

### **NS6602 Nursing II - Maternal and Child Health Nursing**

A one-semester course, eight credit hours. This course utilizes the homeostatic framework to provide a study of knowledge skills and attitudes necessary to afford effective care of the family throughout the child-bearing and child-rearing cycle. Gynecological concepts from reproduction to the menopause are integrated. Deviations from homeostasis are related to specific obstetric, gynecological and child health problems that are most common. The concepts of nutrition, pharmacology, psycho-social skills and the preventive therapeutic and rehabilitation aspects of care are reinforced. Four class hours and twelve clinical laboratory hours per week.

**Prerequisites: EN4402, SO3321, BI5520 must be taken prior to or concurrently with Nursing II, NS6602.**

### **NS6651 Nursing III - Mental and Physical Illness I**

A one-semester course; eight credit hours. This course introduces the principles and practice of comprehensive nursing care to persons in relationship to normal and deviant homeostatic mechanisms. Stress is placed on the promotion of mental health and prevention of mental illness. Principles of therapeutic nutrition, pharmacology, the preventive and restorative aspects of rehabilitation, communication skills and interpersonal relationships are emphasized. Four class hours and twelve clinical laboratory hours per week.

**Prerequisite: SO3321, BI5553 and the humanities elective must be taken prior to or concurrent with NS6651.**

### **NS6652 Nursing IV - Mental and Physical Illness II**

A one-semester course; ten credit hours. This course emphasizes the integration of all areas of nursing practice in applying comprehensive nursing care to persons in relationship to normal and deviant homeostatic mechanisms. Stress is placed on the biophysical pathology in relation to the nursing care needs and emotional reactions of the individual person. Principles of therapeutic nutrition, pharmacology, the preventive and restorative aspects of rehabilitation, communication skills and interpersonal relationships are continued in depth. Five class hours and fifteen clinical laboratory hours per week.

**Prerequisite: The social science elective must be taken prior to or concurrent with NS6652**

### **NS6682 Seminar on Nursing**

A one-semester course; three credit hours. This course provides opportunity for students to challenge contemporary issues facing the nursing profession, and includes present and future trends in nursing education and practice. Students are provided an opportunity to examine political, social and ethical issues utilizing a seminar approach. Opportunities and implications for nursing are explored.

**Prerequisite: NS6682 must be taken concurrent with Nursing VI, NS6652.**

## **Leisure Studies/Outdoor Education**

### **PE1001 Adapted Physical Education**

A one-semester course; two credit hours. This course is geared to meet the specific needs of students who have medical problems in weight control, physical handicaps. Special emphasis on individualized programs of exercise, posture control, corrective exercise. Three class hours per week.

### **PE1002 Archery**

A half-semester course; one credit hour. Basic skills and techniques, cost, care and maintenance of equipment. Interclass competitive shooting. Field trips for practical hunting experience. Three class hours per week.

### **PE1004 Badminton**

A half-semester course; one credit hour. Basic strokes (grip, stance, form), rules of the game, care and selection of equipment. Class tournament arranged. Three class hours per week.

### **PE1006 Bowling**

A half-semester course; one credit hour. The fundamentals of candlepin bowling. Class will be held off campus. Arrangements will be made for transportation. Students pay a nominal charge for each game bowled. Three class hours per week.

### **PE1008 Canoeing**

A half-semester course; one credit hour. Basic instruction for bow and stern, paddling, canoe safety and canoe tripping. Three class hours per week.

### **PE1009 Fencing I**

A one-semester course; two credit hours. A basic course in the art of French foil fencing; fundamental attacks, defense and boutting strategy will be included. Three class hours per week.

### **PE1011 Fly Fishing and Fly Tying**

A one-semester course; two credit hours. Cost, selection and care of various types of fishing equipment. Fundamental skills and techniques. Students will be taken off campus for practical application of skills acquired. Three class hours per week.

### **PE1012 Square and Round Dancing**

A half-semester course; one credit hour. Broad range of elementary, folk and square dancing, including dances from other countries. Three class hours per week.

### **PE1013 Fundamentals of Movement**

A half-semester course; one credit hour. Concepts of the basic principles and practices of body movement. Body development, exercise, posture are emphasized. Three class hours per week.

### **PE1014 Golf**

A half-semester course; one credit hour. The fundamentals of golf; grip, stance, rules, swing and etiquette. Practice will be given with long and short irons, drives and putters. Three class hours per week.

### **PE1015 Golf - Intermediate**

A half-semester course; one credit hour. Designed for students seeking further skill and knowledge beyond the beginning level. The majority of instruction will be held on the golf course. Three class hours per week.

### **PE1017 Karate**

A one-semester course; two credit hours. A progressive program of instruction. Designed for the student seeking skill, knowledge and a philosophy of this oriental sport. There is no contact, but a series of precise exercises leading to proficiency

of technique. Three class hours per week.

#### **PE1018 Modern Dance I**

A half-semester course, one credit hour. A study of the fundamentals of modern dance techniques and personalities contributing to the development of Dance in America. Open to both male and female students. Emphasis is on self-expression through movement. Three class hours per week.

#### **PE1019 Physical Conditioning/Co-Ed**

A half-semester course; one credit hour. A progressive, individualized program of skills and activities designed to improve both muscular and cardiovascular endurance, including jogging, exercise, and weight. This course designed for individualized instruction for men and women. Three class hours per week.

#### **PE1020 Self-Defense**

A half-semester course; one credit hour. Instruction and practice in the art of self-defense for men and women. Strategy, skill and physical conditioning, and valuable skills that can be used in emergency situations. Three class hours per week.

#### **PE1021 Senior Life Saving**

A one-semester course; two credit hours. Standard Red Cross senior life saving certificate issued upon completion of the course. Offered in the Fall semester only. Three class hours per week.

#### **PE1022 Scuba I**

A one-semester course; one credit hour. General course. Emphasis on skin diving and related activities: marine life, water environment, etc. Basic concepts of scuba diving outlined. Waterwork includes swimming skills, use of mask, fins and snorkel, water games. Does not lead to certification or provide familiarity with scuba equipment. See Scuba II. Three class hours per week.

#### **PE1023 Scuba II**

A one-semester course; one credit hour. Basic course leading to certification. Text required. Diving physics, dive planning and preparation, diving diseases, equipment and first aid covered. Water skills stressed. Three open water dives required. Three class hours per week.

**Prerequisite: Satisfactory completion of Scuba I or person capable of completing a written exam and water test to the satisfaction of the instructor**

#### **PE1026 Swimming**

A half-semester course; one credit hour. Fundamentals of elementary and intermediate swimming and diving with emphasis on individual achievement and water safety. Three class hours per week.

#### **PE1027 Tennis I**

A half-semester course; one credit hour. Fundamentals including grip, forehand and backhand drives, serve, etc. plus rules of the game, strategy, care and selection of equipment. Three class hours per week.

#### **PE1028 Tennis II**

A half-semester course; one credit hour. Instruction and

practice in advanced techniques and skills to attain proficiency. Students must meet minimum requirements during the first week of class in order to remain in the course. Three class hours per week.

#### **PE1029 Volleyball**

A half-semester course; one credit hour. Basic knowledge of the rules, regulations, techniques, fundamentals, skills and their application in game situations. Three class hours per week.

#### **PE1030 Water Safety Instruction**

A one-semester course; two credit hours. Methods of teaching swimming and life saving technique. Successful completion results in certification (WSI). Classes are held off campus. Three class hours per week.

**Prerequisite: PE1021 or equivalent**

#### **PE1031 Weight Training**

A half-semester course; one credit hour. Basic principles and skills of weight training. Emphasis on the cardiovascular and flexibility activities. Three class hours per week.

#### **PE1032 Wrestling**

A half-semester course; one credit hour. Basic skills, techniques and strategies of wrestling. Designed to improve both muscular and cardiovascular endurance, as well as improve ability in various wrestling techniques. Three class hours per week.

#### **PE1034 Winter Mountaineering**

A half-semester course; one credit hour. A course designed to acquaint the student with the recreational and fitness benefits of camping and hiking during the winter months. Course includes description of cold weather clothing and equipment, orienteering, foods, snowshoeing, cross-country skiing, winter first aid, day hikes, overnight camp-outs, and an underlying emphasis on conservation and preservation of land, water and wildlife. Three class hours per week.

#### **PE1035 Trampolining I**

A half-semester course; one credit hour. An introduction to the basic skills including bounces, drops (seat, front, back), simple turns and twists, including the turntable and swivel hips. Safety factors are stressed. Three class hours per week.

#### **PE1036 Trampolining II**

A half-semester course; one credit hour. An advanced course including aerial stunts, along with proper spotting techniques and other safety factors. Three class hours per week.

**Prerequisite: PE1035 or equivalent**

#### **PE1038 Cross-Country Skiing**

A half-semester course; one credit hour. This course will include the skills and conditioning necessary to participate in this challenging outdoor event. Class time will be spent participating on a cross-country course when possible, and will include care of equipment and adapting to nature. Three class hours per week.

#### **PE1039 Rock Climbing**

A half-semester course; one credit hour. This fundamental course will include basic techniques: belaying, rappelling,

ascents, descents, the proper use of personal climbing equipment and safety considerations. Most classes will be held outdoors. Three class hours per week.

#### **PE1040 Ballet**

A half-semester course; one credit hour. This is a beginning course covering dance conditioning, the five positions, basic steps and choreography. Also highlighted will be the appreciation and knowledge of this most graceful of art forms. Three class hours per week.

#### **PE1041 Yoga**

A one-semester course; two credit hours. This is a course in self-realization covering Hatha exercises and breathing, nutrition, relaxation, chanting, meditation and Vedic philosophy. Classes will consist of practice and discussion aimed at improving life through incorporating the wisdom of this timeless discipline. Three class hours per week.

#### **PE1042 Jogging**

A half-semester course; one credit hour. This course will elaborate on one of the most simple but effective forms of conditioning. Class time will cover how to warm up, train and pace yourself so as to enjoy the pleasant overall exhilaration this activity promotes. Three class hours per week.

#### **PE1043 Ethnic Dancing**

A half-semester course; one credit hour. Designed to acquaint a person with the expressive movement patterns of various cultures throughout the world. Along with the dances of Europe, the class will include Russian Folk Dance, Belly Dancing, Indian Dancing and dances of the Orient and Polynesia. Three class hours per week.

#### **PE1044 Cycling**

A half-semester course; one credit hour. This course will cover body conditioning, care of the bicycle and knowledge necessary to enjoy this fast-growing sport. Time will be spent in touring and following pre-mapped itineraries. Three class hours per week.

#### **PE1046 Judo**

A half-semester course; one credit hour. This course is an introduction to the game, its history, safety considerations, and the basic skills including falling, throwing, mat grappling and armlock techniques. Three class hours per week.

#### **PE1047 Sailing**

A half-semester course; one credit hour. An introduction to sailing, including basic maneuvers and handling, nomenclature, equipment, weather and water consideration, and safety rules and regulations. Three class hours per week.

#### **PE1049 Modern Dance II**

A half-semester course; one credit hour. An advanced study of modern dance. Utilizing basic dance skills from Dance I. The student learns and practices advanced techniques and skills to attain proficiency. Students must conduct and perform in dance concert as part of the requirements for this course. Three class hours per week.

#### **PE1050 Racquet Ball**

A half-semester; one credit hour. An introductory course to one wall racquetball. Includes the basic strokes, footwork, rules, regulations and strategy. Three class hours per week.

#### **PE1051 Paddle Tennis/Platform Tennis**

A half-semester course; one credit hour. An introduction to one of the fastest growing sports in America. A year-round game developed to take the place of Tennis in the off season, but has become a game of its own for all seasons. Includes the basic strokes, footwork, rules, regulations and strategy. Three class hours per week.

#### **PE1052 Mountaineering**

A half-semester course; one credit hour. A course designed to acquaint the student with the recreational and fitness benefits of camping and hiking. The importance of the selection and maintenance of equipment, use of map and compass, instruction in basic camp craft skills (fire-building, cooking, shelter-building, etc.) and an underlying emphasis on conservation and preservation of land, water and wild life. Three class hours per week.



#### **PE1055 Saltwater Recreational Fishing**

A half-semester course; one credit hour. This course is designed for the novice saltwater fisherman and/or boatowner who is interested in developing his or her skills and increasing knowledge of methods and strategies of angling for the many varieties of saltwater fish off the Massachusetts coast. Three class hours per week.

#### **PE2001 Introduction to Physical Education**

A one-semester course; three credit hours. A career-oriented course designed to introduce new students to the profession of Physical Education, and to make them familiar with the requirements and professional preparation. Three class hours per week.

**PE2002 First Aid and Safety**

A one-semester course; three credit hours. Prepares the student to deal with most types of medical emergencies. Classes include simulated disaster, ambulance tour, practical skills, knowledge of the Standard Red Cross First Aid book, and instruction in cardiopulmonary resuscitation. When requirements are met, a standard first aid card and CPR card in basic life support are given. Three class hours per week.

**PE2004 Introduction to Outdoor Education**

A one-semester course; three credit hours. A career oriented course designed for the student who may be interested in making some aspects of outdoor education a career. Three basic areas of concentration are outdoor leadership, conservation and environmental education. These three concepts are uniquely experienced through an interdisciplinary approach, individually and collectively, involving skill exposure, group discussions and field trips. Three class hours per week.

**PE2007 Camp and Environment Interpretation**

A one-semester course; three credit hours. An introductory course in camp counseling and environment interpretation designed to give the prospective camp counselor a background and insight into the workings of camp life and an understanding of the youths he/she will be working with and a knowledge of the resources available. There will be opportunities for practical application of camping skills as well as experiences in out-of-doors activities such as cookouts, sleep-outs and weekend camping trips. Three class hours per week.

**PE2015 Contemporary Health Issues**

A one-semester course; three credit hours. Designed to provide the student with an understanding of contemporary health problems of society. Students will examine topics such as health as a quality of life, preventative medicine, health insurance, concepts of death and dying, and decision making that affects health and effective living. Three class hours per week.

**PE2050 Experiences in Self-Awareness**

A one-semester course; three credit hours. Combines lectures, physical activities, and group exercises designed to give students a broad range of self-enriching experiences to aid their growth and awaken them to their individual potentialities. Emphasis is on acquainting students with possibilities for person development, devising a workable life plan, getting more in touch with their minds and bodies, and asserting control over mental, physical and environmental processes. Three class hours per week.

**PE2293 Innovative Movement Experiences: Childhood to Adult**

A one-semester course; two credit hours. Study of and participation in activities, games and exercises designed to increase motor ability and group interaction of the young child. Two class hours per week.

**PE0000 Special Topics in Physical Education**

A one-semester course; one to four credit hours. Directed readings, directed research, seminar or class in specific topics in discipline. The procedures to be followed and approval forms are available in the Registrar's office.

**PE2295 Slimnastics**

A one-semester course; two credit hours. An exercise and activity class emphasizing weight control through individualized diet instruction, ways to increase tone in specific muscle groups and the development of an appropriate level of physical fitness. Two class hours per week.

**Cardiopulmonary Resuscitation [C.P.R.] and the Cardiovascular System**

A fifteen-hour course; one credit hour. This course covers the physiology of the cardiovascular system; the prevention, symptoms and treatment of heart attack; and practice in one and two-rescuer C.P.R., infant C.P.R. and procedures for obstructed airway. Satisfactory completion of the American Heart Association Exam and practical tests will qualify the student to receive a card certifying him or her in basic life support. Three class hours per week.

**Philosophy: Liberal Arts****CD0201 Bioethics**

A one-semester course; three credit hours. An examination of the interrelationship between philosophy and problems arising from advances in modern biology, including the ethical implications of the problems of population control, resource allocation and biomedicine. This is a discussion course for those students who enjoy dealing with ideas. There are no prerequisites, but a general background in the sciences or philosophy may make the ideas presented in the course more meaningful. This course might not be transferable as a science requirement. Three class hours per week.

**PH0000 Special Topics in Philosophy**

A one-semester course; one to four credit hours. Directed readings, directed research, seminar or class in specific topics in discipline. The procedures to be followed and approval forms are available in the Registrar's office.

**PH1101 Introduction to Philosophy**

A one-semester course; three credit hours. The aims, nature and problems of philosophy, with particular emphasis upon theory of knowledge, metaphysics, ethics and philosophy of religion. Three class hours per week. (Formerly called Introduction to Philosophy I.)

**PH1102 Problems of Philosophy**

A one-semester course; three credit hours. A critical analysis of the philosophic issues concerning the nature of man, freedom and determinism, esthetics, social and political philosophy and philosophy of history. Three class hours per week. (Formerly called Introduction to Philosophy II.) No prerequisite.

### **PH1141 Ethics**

A one-semester course; three credit hours. A study of representative ethical systems and how they deal with moral issues. Attention will be given to the meanings of basic terms and to the application of ethics to major personal and social problems of our times such as those in law, medicine, international issues, sexuality and lifestyle. Three class hours per week.

### **PH1151 Introduction to Logic**

A one-semester course; three credit hours. Course will inquire into the nature of critical thinking. Such topics as the functions of language, experimental truth and logical validity, the structure of deductive arguments, and basic inductive methods will be considered. Three class hours per week.

## **Physics**

### **PI5501 General Physics I**

A one-semester course; four credit hours. Intended for liberal arts students and some science majors. The course will examine the elements of mechanics, sound, heat, electricity, magnetism and light. Plane trigonometry and algebra will be used. Three class hours and three laboratory hours per week.

**Prerequisite: One year of college mathematics**

### **PI5502 General Physics II**

A one-semester course; four credit hours. Intended for liberal arts students and some science majors. The course will examine the elements of mechanics, sound, heat, electricity, magnetism and light. Plane trigonometry and algebra will be used. Three class hours and three laboratory hours per week.

**Prerequisite: PI5501**

### **PI5503 Introductory Physics I**

A one-semester course; four credit hours. This course is designed to cover concepts in physics which are necessary for a basic understanding of our twentieth century physical world. The treatment will be largely non-mathematical and will cover topics such as relative motion, mass energy relations and atomic structure. Three class hours and three laboratory hours per week.

### **PI5504 Introductory Physics II**

A one-semester course; four credit hours. A continuation of PI5503 with the same objectives, but focusses upon other interesting topics such as heat, light and radiation. Three class hours and two laboratory hours per week.

**Prerequisite: PI5503**

### **PI5510 Physics for Respiratory Therapists**

A one-semester course; four credit hours. The course presents physics material with special emphasis on the physical principles and topics relating to Respiratory Therapy. Topics of special interest will include mechanics of fluid flow, heat exchange in evaporation and condensation, gas laws. Three class hours and two laboratory hours per week.

**Prerequisites: RT6613 and RT6615**

### **PI5621 Applied Physics I**

A one-semester course; four credit hours. Fundamentals of mechanical motion using algebra and graphical solutions. Principles of heat transfer, wave motion, vibration and sound. Basic fluid mechanics. Three class hours and three laboratory hours per week.

**Prerequisite: MA5621 or equivalent**

### **PI5622 Applied Physics II**

A one-semester course; four credit hours. Fundamentals of electricity, magnetism, and electrochemical effects. Electromagnetic induction and magnetic properties. Introduction to physical optics, lenses, mirrors and optical instruments. Three class hours and three laboratory hours per week.

**Prerequisite: PI5621**

### **PI5623 Engineering Physics I**

A one-semester course; four credit hours. To be taken concurrently with MA5683. The principles of mechanics, including composition and resolution of vectors, statics, moments, rectilinear motion, Newton's second law, motion of a projectile, work and energy, impulse and momentum, circular motion, rotational kinematics and dynamics, elasticity, harmonic motion. Three class hours and three laboratory hours per week.

**Prerequisite: MA5661 or equivalent**

### **PI5624 Engineering Physics II**

A one-semester course; four credit hours. To be taken concurrently with MA5684. Principles of electricity and magnetism, Coulomb's Law, potential, D.C. circuits, the magnetic field, galvanometers, ammeters, voltmeters, wattmeters, the D.C. motor, magnetic field of a current and of a moving charge, induced electromotive force, capacitance and inductance, magnetic properties of matter. Three class hours and three laboratory hours per week.

**Prerequisite: PI5623**

### **PI5651 Engineering Physics III**

A one-semester course; four credit hours. Heat, sound and optics, including the following: thermometry, quantity of heat, change of state, work and heat; heat transfer, thermal properties of matter, the first and second law of thermodynamics, wave motion, vibrating systems; acoustical phenomena; the nature and propagation of light; reflection and refraction at a single surface, lenses and lens aberration; optical instruments; illumination, color, and polarized light. Three class hours and three laboratory hours per week.

**Prerequisite: PI6524**

### **PI0000 Special Topics in Physics**

A one-semester course; one to four credit hours. Directed readings, directed research, seminar or class in specific topics in discipline. The procedures to be followed and approval forms are available in the Registrar's office.



## **Psychology: Liberal Arts**

### **PS1101 Introduction to Psychology**

A one-semester course; three credit hours. A survey course covering major topics and theorists in the field. The social, emotional, motivational, sensory and cognitive realms of behavior will be studied with a primary emphasis on normal developmental trends and patterns. Theorists considered will include Maslow, Freud, Piaget, Erikson and Skinner among others. This course is recommended as a prerequisite for other psychology courses. Three class hours per week.

### **PS1151 Child Psychology**

A one-semester course; three credit hours. In this course students will 1) identify and discuss some of the most important aspects of normal physical, mental, emotional, social and personality development; 2) learn about biological and environmental influences on those areas of development; 3) examine some of the diverse approaches in child development research and theory; and 4) apply such research and theory to real life situations in order to become aware of the flexibility that occurs in the developmental process. Prior exposure to Introduction to Psychology is recommended but not required. Three class hours per week.

### **PS1152 Adolescent Psychology**

A one-semester course; three credit hours. A study of adolescent development from the point of view of both the adolescent and the adult. Basic theories of development will be examined with an emphasis on social, emotional, physical and cognitive domains. Communication and problem solving techniques appropriate to this stage will be considered in general and with reference to specific potential conflict areas. May not be offered every semester. Three class hours per week.

### **PS1153 Educational Psychology**

A one-semester course; three credit hours. A study of the principles of learning, the nature of the learner and the part played by the classroom teacher in bringing these two together in the art of teaching. The role of the behavioral sciences in the art of teaching is emphasized. The course is recommended for students considering future study in education or psychology. Introduction to Psychology is strongly recommended as a prerequisite. Three class hours per week.

### **PS1154 Psychology of Personality**

A one-semester course; three credit hours. This course introduces students to a variety of theoretical approaches to the understanding of character and personality. It includes psychoanalytic, learning, humanistic, trans-personal and existential theories. Previous exposure to basic psychological concepts and theorists is recommended but not required. May not be offered every semester. Three class hours per week.

### **PS1155 The Valuing Process**

A five-week course; one credit hour. This is an experience oriented course in the process of valuing. The course objective is to aid students in developing and applying the use of critical thinking to matters of the affective domain; to aid them in assessing priorities, setting goals and clarifying their individual relationships to the world in which they live. Participants will be exposed to a variety of values clarification strategies designed to facilitate their choosing values and integrating those values into their daily lives. Three class hours per week.

### **PS1203 Human Growth and Development**

A one-semester course; three credit hours. This course is designed to help students understand behavior from conception to maturity. Specific problems which occur during the life cycle will be discussed and explored. Patterns and sequences of growth and individual differences are reviewed in relation to the effects of heredity and environmental factors. Three class hours per week.

### **PS1351 Social Psychology**

A one-semester course; three credit hours. A discussion of the fact that human nature is social and the implications of that fact; principally the effect of others upon one's mind and self-imagery, and the complex social coordination that it allows. Special attention to individuation, the social validation of meaning and perception, symbols and symbolic interaction. Three class hours per week.

### **PS1354 Human Relations**

A one-semester course; three credit hours. A group experience providing students with an opportunity to study and experience interpersonal relationships in a small group in which the focus

is on interpersonal communication. Limit 20 students. Permission of instructor recommended. May not be offered every semester. Three class hours per week.

#### **PS1651 Industrial Psychology**

A one-semester course; three credit hours. An introduction to problems of human relations in business and industry. Such problems as selection, placement, conflict, supervision, motivation and cooperation will be examined. (Case studies will be used when feasible). May not be offered every semester. Three class hours per week.

#### **PS1751 Abnormal Psychology**

A one-semester course; three credit hours. The study of the etiology, treatment and prevention of mental disorders. Includes the study of functional and organic psychoses, psychoneuroses and borderline maladjustments. Introduction to Psychology is recommended as a prerequisite. Three class hours per week.

#### **PS1999 Special Topics in Psychology**

A one-semester course; one to four credit hours. Directed readings, directed research, seminar or class in specific topics in discipline. The procedures to be followed and approval forms are available in the Registrar's office. Outlines for completed courses may be requested from the Registrar.

#### **PS2112 Problems in Early Childhood Education**

A one-semester course; three credit hours. A sociological-psychological study of factors leading to educational success in representative compensatory programs for the young child. This course centers around the role of the family and cultural background as they relate to the development of school skills. Three class hours per week.

#### **PS2114 Problems of the School Aged Child**

A one-semester course; three credit hours. The course is designed to introduce the student to the variety of problems adults encounter with children particularly in the classroom setting. An effort will be made to: 1) identify the needs and rights of children; 2) classify specific problem areas ranging from physical handicaps to cognitive, social and emotional difficulties; 3) examine and discuss methods of relating to and teaching "problem children" and 4) identify support resources available in the community to teachers and parents. A simultaneous field work assignment is recommended. Prior exposure to a psychology course, concepts and theorists is strongly recommended. Three class hours per week.

#### **PS2802 Personal Counselling: Basic Theory and Practice**

A one-semester course; three credit hours. Students will examine their own motives, goals, and life-orientation. They will review the history of helping relationships. Practical exercises in class and out will build an awareness of the therapeutic relationship; listening skills; rapport. Individual therapy, group therapy, family therapy, behavior therapy and others will be discussed and modeled. Limit 20 students. May not be offered every semester. Three class hours per week.

#### **PS2804 Career and Educational Exploration**

An eight-week course; one credit hour. The course will deal with personality theory, interests, values and their relationship to satisfying and rewarding career and/or academic choices.

Interest, personality and values tests will be administered and interpreted and will serve as the basis for research into the great variety of career and academic choices possible to the individual. The course will provide information about the existence and location of materials describing college majors, colleges and careers, instruction in resume writing, and interview techniques. Two class hours per week.

#### **PS6551 Gerontology**

A one-semester course; three credit hours. An exploration of the unique physical, emotional, social and mental characteristics and problems of the elderly. Three class hours per week.

### **Religion: Liberal Arts**

#### **RE1101 World Religions**

A one-semester course; three credit hours. A comparative study of the major religions of the world, including Hinduism, Buddhism, Taoism, Confucianism, Sikhism, Judaism, Christianity and Islam. Three class hours per week.

#### **RE1102 Contemporary Western Religion**

A one-semester course; three credit hours. A study of the major current movements in theology and practice of religious life, with emphasis on American religion. Death of God, Religious atheism, secular Christianity, the charismatic revival and the Jesus movement are among the themes discussed. Opportunity will be given for field work in the religious life of the Merrimack Valley. Three class hours per week.

#### **RE1103 Eastern Philosophies and Religions**

A one-semester course; three credit hours. A survey of the major religious traditions of India, China and Japan, with emphasis on Hinduism, Buddhism, Confucianism, Taoism and Shinto. The course is aimed at an acquaintance with the ways of thinking and living, as well as the value judgement inherent in eastern culture traditions. Three class hours per week.

#### **RE1104 Judaism, Christianity and Islam**

A one-semester course; three credit hours. A survey of the Judaic, Christian and Islamic traditions with emphasis on historical and cultural perspective. Attempts are made to assess the role of religion in the ancient, medieval and modern societies of the West and Middle East. Three class hours per week.

## **RT6518 Radiologic Orientation II**

A one-semester course; five credit hours. This course will continue basic positioning, radiographic exposure and their interrelated principles. An evaluation and study of the use of contrast media. Nursing procedures related to radiology and radiologic technology, pediatric positioning will be considered. Two two-hour classes and one one-hour class per week.

**Prerequisite: RT6517**

## **RT6551 Radiologic Technology I**

A one-semester course; three credit hours. The following subjects will be examined in detail: a continuation of radiographic positioning, advanced radiographic positioning, radiologic osteology. Three class hours per week.

**Prerequisite: RT6518**

## **RT6552 Radiologic Technology II**

A one-semester course; three credit hours. The following subjects will be studied in detail: intro-oral radiography, a survey of medical and surgical diseases, departmental administration, equipment maintenance. Three class hours per week.

**Prerequisite: RT6551**

## **RT6561 Principles of Radiologic Technique I**

A one-semester course; six credit hours. The student will study radiographic exposure, radiation protection and special procedures as they relate to radiology and radiologic technology. Three two-hour classes per week.

**Prerequisite: RT6552**

## **RT6562 Principles of Radiologic Technique II**

A one-semester course; six credit hours. This course will study in detail the principles of radiation therapy, radioactive isotopes and film critique. Three two-hour classes per week.

**Prerequisite: RT6561**

## **RT6571 Seminar I [Radiologic Technology]**

A one-semester course; three credit hours. A concurrent aspect of Radiologic Technology I and Principles of Radiologic Technique I. The student will apply under direction and supervision at the affiliate hospital principles learned in the classroom. Emphasis will be placed on solidification of theoretical knowledge in the hospital setting. Activities will be under the direction of the college and the liaison instructor at the affiliate hospital. Twenty-two hours of directed clinical activity and two hours of discussion for a total of twenty-four hours per week.

**Prerequisite: RT6561 and RT6551 concurrently**

## **RT6572 Seminar II [Radiologic Technology]**

A one-semester course; three credit hours. This course allows the student to put into practice at the affiliate hospital, the knowledge gained from studies in the other Radiologic Technology courses. Clinical activities will follow concurrently the material covered in Radiologic Technology II and Principles of Radiologic Technique II. Twenty-two hours of directed clinical activity and two hours of discussion for a total of twenty-four hours per week.

**Prerequisite: RT6552 and RT6562 concurrently**

# **Radiologic Technology**

## **RT6501 Introduction to Radiologic Technology**

A one-semester course; three credit hours. This introductory course examines program, x-ray department, hospital and medical rules and protocol, historical perspectives of medicine and radiology, elementary radiation protection and ethics. Basic darkroom procedures and technique manipulation will be stressed. The course orients the student regarding details of academic and clinical environments which lead toward growth in professional development. Three class hours per week.

**Prerequisite: Enrollment in Radiologic Technology program**

## **RT6511 Radiologic Science I**

A one-semester course; three credit hours. Designed to examine the fundamentals of physical principles of electrical and x-ray physics and the operational study of x-ray equipment and auxiliary devices. The course will examine fundamental and derived units, mechanics, matter, magnetism and electricity, electromagnetism, generators, motors and transformers. Three class hours per week.

## **RT6512 Radiologic Science II**

A one-semester course; three credit hours. Emphasis will be placed on the formation of ionizing radiation by further analysis of x-ray and other types of circuits, tubes, etc., laws of motion, thermal considerations, optics and lens systems and radioactivity. Three class hours per week.

**Prerequisite: RT6511**

## **RT6517 Radiologic Orientation I**

A one-semester course; five credit hours. This course will offer a comprehensive and detailed study of the history of x-ray technology and radiology, medical ethics, elementary radiation protection, medical terminology, darkroom chemistry, basic principles of radiographic exposure, preliminary radiographic positioning and radiographic osteology. Emphasis will be placed on the understanding of radiologic technology and its place in the hospital setting. Two two-hour classes and one one-hour class per week.

# Respiratory Therapy

## RT6611 Respiratory Therapy I

A one-semester course; six credit hours. Principles and procedures in medical gas administration, cleaning and sterilization techniques, humidification and aerosol therapy and cardiopulmonary pharmacology. Six class hours per week.

## RT6612 Respiratory Therapy Practicum I

A one-semester course; four credit hours. The clinical application of those procedures and principles discussed in Respiratory Therapy I. Presented at one of the affiliated hospitals and administered jointly by the hospital clinical instructor and a liaison faculty member from the college. Sixteen practicum hours per week.

**Prerequisite: RT6611 concurrently**

## RT6621 Respiratory Therapy II

A one-semester course; six credit hours. Principles and procedures in IPPB and ventilator management, cardiopulmonary resuscitation and airway management. Also, an in-depth presentation of cardiopulmonary physiology. Six class hours per week.

## RT6622 Respiratory Therapy Practicum II

A one-semester course; four credit hours. The clinical application of those procedures and principles discussed in Respiratory Therapy II. Presented at one of the affiliated hospitals and administered jointly by the hospital clinical instructor and a liaison faculty member from the college. Sixteen practicum hours per week.

**Prerequisite: RT6621 concurrently**

## RT6629 Seminar for Respiratory Therapy Technicians

A five-week course; offered in the summer; four credit hours. This program is designed to round out the clinical experience and subject material presentation of the student in anticipation of entrance into professional life.

### REQUIREMENT FOR ONE-YEAR CERTIFICATE PROGRAM STUDENTS ONLY.

## RT6631 Respiratory Therapy III

A one-semester course; six credit hours. Principles and procedures in intensive cardiopulmonary care and advanced ventilator management. The specialty areas of pediatric respiratory care and rehabilitation will also be presented. Six class hours per week.

## RT6632 Respiratory Therapy Practicum III

A one-semester course; four credit hours. The clinical application of those procedures and principles discussed in Respiratory Therapy III. Presented at one of the affiliated hospitals and administered jointly by the hospital clinical instructor and a liaison faculty member from the college. Sixteen practicum hours per week.

**Prerequisite: RT6631 concurrently**

## RT6641 Respiratory Therapy IV

A one-semester course; six credit hours. Principles and procedures in advanced blood gas analysis and pulmonary function testing. Also, a study of cardiopulmonary disease with an emphasis on pathophysiology. Six class hours per week.

## RT6642 Respiratory Therapy Practicum IV

A one-semester course, four credit hours. The clinical application of those procedures and principles discussed in Respiratory Therapy IV. Presented at one of the affiliated hospitals and administered jointly by the hospital clinical instructor and a liaison faculty member from the college. Sixteen practicum hours per week.

**Prerequisite: RT6641 concurrently**

## RT6649 Respiratory Therapy Seminar

A one-semester course; two credit hours. Integrates the psychology of patient care and interpersonal relations with the principles of team patient care and hospital organization. An analysis is made by the student of actual patient care and management situations. One two-hour seminar class per week.

# Science: Liberal Arts

## CD9575 History of Science and Technology

A one-semester course; three credit hours. The study of the historical and philosophical development of science and technology and the practical consequences of discovery on the human activities. The course focuses on the examination of the interplay of science and technology with their social and intellectual impact through the ages. The course may be applied towards a social science or a natural science requirement. Three class hours per week.

## SC5011 Man and His Environment

A one-semester course; three credit hours. Study of the ecology of the ape, primitive man, and the cultured and urbanized man of today. The study of the progressive deterioration of man's balance with the rest of nature, showing the way man has to change his psychological attitudes in order to implement and develop new technical solutions. The study of the technical solutions necessary to solve the three major problems of today: overpopulation, inadequate resources and pollution. Three class hours per week.

## SC5503 Integrated Science I

A one-semester course; three credit hours. Emphasis is placed on chemistry, physics and microbiology. The human body as a whole, the skin, the skeletal system, and the muscular system are studied. Three class hours per week.

### **SC5504 Integrated Science II**

A one-semester course; three credit hours. Emphasis is placed on the bodily systems, metabolism, nutrition, reproduction, genetics, the eye, and the ear in particular. Three class hours per week.

### **SC5511 Physical Science I**

A one-semester course; four credit hours. An integrated course which considers the basic principles of the physical universe, including the study of the composition of substances, the atmosphere, synthetics, the earth, and the universe, in an effort to develop an understanding of the relationship of the sciences to everyday life. Three class hours and two laboratory hours per week.

### **SC5512 Physical Science II**

A one-semester course; four credit hours. A continuation of SC5511. Three class hours and two laboratory hours per week.

### **SC0000 Research Topics in Science**

An open-end investigatory course with credit varying from one to three hours. Designed for the advanced student who is interested in a career in the sciences. The student will work on a topic of his choice under the direction of one faculty member. Topics available include areas in the biological, earth and physical sciences. Interested students should obtain a list of faculty members showing their areas of specific interest and then consult with the faculty member of his choice before registering for the course. Limited to one semester. THIS COURSE DOES NOT FULFILL THE SCIENCE REQUIREMENTS FOR GRADUATION.

**Prerequisite: Permission of the instructor**

### **SC0000 Special Topics in Science**

A one-semester course; one to four credit hours. Directed readings, directed research, seminar or class in specific topics in discipline. The procedures to be followed and approval forms are available in the Registrar's office.

## **Security**

### **SE1001 Introduction to Security**

A one-semester course; three credit hours. The history, nature and scope of private security in modern society; the basic principles of physical security, internal loss prevention, defensive systems, fire prevention and safety; the security function in the corporate structure; operations and career opportunities exemplified in such specific areas as industrial, retail, hospital, cargo and computer security; security services, contract or proprietary. Three class hours per week.

### **SE1003 Security Administration**

A one-semester course; three credit hours. The development of the security services function, interrelationships to the legal process; career roles and operational processes in various types of security organizations. Specifically covers the conduct of surveys of security needs, establishment of policies and procedures for security, advisement of other organizational activities about security problems, establishment of security

training and education programs and providing management direction for interdepartmental cooperation for security. Three class hours per week.

### **SE1005 Principles of Loss Prevention**

A one-semester course; three credit hours. The operation of security departments including functions of mercantile establishments, dishonest employees; shoplifters; management and public relations; receiving, shipping and warehousing; special laws and procedures. An overview of the functional operations of various specialized areas of security, surveys and loss prevention management in proprietary and governmental institutions. Three class hours per week.

### **SE1010 Campus Security**

A one-semester course; three credit hours. An introduction to the philosophical and historical background of campus security and police. The principles of organization, administration, functions and specific activities of security on the campus; public relations, personnel, training, attitudes; direction in the future, generally, and more specifically as related to the Massachusetts experience. Three class hours per week.

### **SE1012 Hospital Security**

A one-semester course; three credit hours. Introduces organizational concepts and the role of the hospital security function. Deals with philosophical and practical security operations in the hospital setting. Also discussed will be the functions, specific activities, public relations, personnel attitudes, unique problems and direction of the future. Three class hours per week.

### **SE1014 Organizational Security Management**

A one-semester course; three credit hours. A systems approach for organizational security management. Emphasis is upon a total and open systems approach to the management functions related to the organizational function of security. Includes a description of the services of organizational security to promote a generalized knowledge and understanding of security requirements; covers seven universal managerial functions. Three class hours per week.

## **Shorthand/Dictation/Transcription**

### **SH6621 Principles of Shorthand**

A one-semester course; three credit hours. Gregg shorthand principles, including the shorthand alphabet, brief forms, phrasing, and other abbreviating devices. Development of the ability to take dictation on practiced material at progressively higher levels. Study of the non-shorthand elements of spelling and punctuation. Four class hours per week.

### **SH6622 Intermediate Shorthand**

A one-semester course; three credit hours. Reinforcement of shorthand principles, development of ability to take new matter dictation at progressively higher levels, and procedures and methods for handling simple, office-style dictation problems. Four class hours per week.

**Prerequisite: SH6621 or equivalent**

### **SH6623 Machine Shorthand**

A one-semester course; three credit hours. A beginning course in which touch shorthand develops through the use of a stenograph machine introduction and practice activities designed to reinforce keyboard mastery; the student acquires a thorough knowledge of the principles of machine shorthand. Four class hours per week.

### **SH6624 Intermediate Machine Shorthand**

A one-semester course; three credit hours. Extension and development of machine shorthand theory. Quick recognition of phonetic sounds, accuracy of notes, and rapid reading are stressed to bring minimum speeds to the level of 100 words a minute. Four class hours a week.

**Prerequisite: SH6623**

### **SH6625 Advanced Machine Shorthand**

A one-semester course; three credit hours. Development of fluent and accurate writing and transcription of material dictated at speeds from 100 to 140 words a minute. Four class hours a week.

**Prerequisite: SH6624 and TW6622 or equivalent**

### **SH6641 Technical Stenography**

A one-semester course; three credit hours. Study of shorthand for technical terms, phrases, and abbreviations peculiar to each technical field and development of the ability to devise technical shorthand outlines. Preparation of technical reports with a proficiency in proofreading and exactness. Three class hours per week.

**Prerequisite: SH6622**

### **SH6643 Technical Dictation and Transcription**

A one-semester course; three credit hours. Development of ability to take dictation at progressively higher levels on technical materials and to transcribe accurately. Emphasis is placed on the transcribing problems peculiar to the technical field. Five class hours per week.

**Prerequisite: SH6671 and SH6641**

### **SH6671 Introductory Shorthand, Dictation and Transcription**

A one-semester course; three credit hours. Development of ability to take dictation at progressively higher levels. Emphasis is placed on the mechanics of English including spelling and punctuation and the growth of effective transcribing techniques. Five class hours per week.

**Prerequisite: SH6622 and TW6622 or equivalent**

### **SH6672 Advanced Shorthand, Dictation and Transcription**

A one-semester course; three credit hours. Development of shorthand skill at the 100 to 120 word levels. Reinforcement of previously learned typing and shorthand skills to improve accuracy and speed of transcription. Advanced office-style procedures. Five class hours per week.

**Prerequisite: SH6671**

### **SH6673 Expert Shorthand, Dictation and Transcription**

A one-semester course; three credit hours. Development of shorthand skill to the expert levels of 120 to 160 words per minute. Study of shorthand reporting short cuts. Vocabulary of executive dictation. Further development of transcribing skills. Emphasis on growth of ability to do conference reporting. Five class hours per week.

**Prerequisite: SH6672**

### **SH6674 Shorthand Skills Review**

A one-semester course; three credit hours. Accelerated review of shorthand theory. Special emphasis on joined and disjoined word prefixes and suffixes. Review and development of dictation skills above minimum levels. Progression on an individualized basis. Four class hours per week.

**Prerequisite: SH6621 or equivalent**

### **SH6675 Shorthand Speed Development**

A one-semester course; three credit hours. Development of shorthand vocabulary to high levels of syllabic intensity. Specialized business vocabulary. Pretranscription training. Continued skill development in dictation. Programs planned to accommodate student's level of skill. Four class hours per week.

**Prerequisite: SH6621 or equivalent**

### **SH6677 Medical Dictation and Transcription**

A one-semester course; three credit hours. Development of the shorthand vocabulary necessary to write from dictation and to transcribe medical dictation. Practice in preparing various kinds of medical reports. Five class hours per week.

**Prerequisite: SH6671 and MR6605**

### **SH6679 Legal Dictation and Transcription I**

A one-semester course; three credit hours. Development of a basic legal shorthand vocabulary. Study of the duties and responsibilities of the legal secretary in a law office. Four class hours per week.

**Prerequisites: SH6622 and TW6622**

### **SH6691 Legal Dictation and Transcription II**

A one-semester course; three credit hours. Development of the ability to take rapid legal dictation and to transcribe accurately. Students are required to type in correct legal format and be familiar with the use of legal instruments and documents. Study of the maintenance of a law library and typical law office procedures. Four class hours per week.

**Prerequisite: SH6679**



## **Secretarial Procedures**

### **SK6651 Office Machines I**

A one-semester course; one credit hour. Introduction and development of the basic skills needed to operate duplicating and photocopy equipment, adding-listing machines, electronic calculators and rotary, printing and key-driven calculators. Introduction to common types of transcribing equipment. Two class hours per week.

**Prerequisite: TW6621 or equivalent**

### **SK6652 Office Machines II**

A one-semester course; three credit hours. Opportunity for intensive development in the operating of duplicating and photocopy equipment, as well as adding machines and common types of calculators. Emphasis on executive typewriters and executive transcribing equipment. Study of reprographics, magnetic tape and automatic typewriting equipment. Four class hours per week.

**Prerequisite: TW6622 or equivalent**

### **SK6653 Machine Transcription**

A one-semester course; three credit hours. Development of high-level skills in the use of transcription equipment. Emphasis is placed on the use of business, professional, and technical materials. Development of vocational transcription rates. Four class hours per week.

**Prerequisite: TW6622**

### **SK6655 Medical Machine Transcription**

A one-semester course, three credit hours. Introduction to machine transcription and development of a medical vocabulary. Development of vocational competence in medical transcription. Four class hours per week.

**Prerequisite: TW6622 and MR6605**

### **SL6661 Secretarial Procedures I**

A one-semester course; three credit hours. Theory and problems in office and records management, selection and maintenance of office supplies and equipment, dictation and transcription procedures, composition of business letters, processing of mail, and postal and shipping services. Three class hours per week.

**Prerequisite: TW6622 and SH6622**

### **SL6662 Secretarial Procedures II**

A one-semester course; three credit hours. Receptionist and telephone techniques, and handling travel arrangements. Preparation of business reports, statistical charts and graphs. Secretarial responsibilities for banking, insurance, investment and payroll services. Three class hours per week.

**Prerequisite: TW6622 and SH6622**

### **SL6665 Office Administration**

A one-semester course; three credit hours. Development of judgements and insights needed by the executive secretary to function on the administrative or supervisory levels. Analysis of long-range office projects, determination of work priorities, organization of research information, and the place of human relations in the supervisory process. A case study approach to the problems of office supervision. Three class hours per week.

### **SL6666 Introduction to Word Processing**

A one-semester course; three credit hours. Nature, purpose and function of word processing. Emerging structure of the word processing department in relationship to the total office organization. Typing, editing, transcribing and communication skills necessary for the successful word processor and correspondence secretary. Typical office plans, forms and media of communication. Four class hours per week.

**Prerequisite: TW6631 and SL6661**

### **SL6668 Secretarial Field Experience**

A one-semester course; three credit hours. Students are assigned to offices on the basis of interest and ability so that they may become a part of the business world before graduation. The student is supervised at the college by the departmental faculty and at work by the employer. One class hour and eight office hours per week.

**Prerequisite: SH6671 and TW6631**

### **SL6680 Medical Secretarial Procedures**

A one-semester course; three credit hours. Theory and problems in the management of the medical office including filing, making appointments, completing medical forms, telephone techniques, medical bookkeeping, and dictation and transcription procedures related to the medical office. Three class hours per week.

**Prerequisite: SH6677 and MR6605**

## **Sociology: Liberal Arts**

### **SO3321 Introduction to Sociology**

A one-semester course; three credit hours. This course is designed to provide the student with an understanding of 1) concepts basic to sociology, 2) the impact of social forces on human behavior, 3) modes of social interaction; and 4) relevance of sociology for the student as a member of the human community. Three class hours per week.

### **SO3322 Introduction to Archaeology**

A one-semester course; three credit hours. An introduction to the methods and theory of archaeology with special emphasis on New England. A basic survey of Old World, North and Meso American cultural development as reflected in prehistoric records. May not be offered every semester. Three class hours per week.

### **SO3323 Early Humans: Introduction to Anthropology**

A one-semester course; three credit hours. An understanding of our past - its physical and social aspects, how humans looked and behaved. Using fossil evidence, present day societies, animal studies and other relevant information, this course traces the beginning of life from the earliest to the arrival of humans on the scene and our evolution until 10,000 years ago. May not be offered every semester. Three class hours per week.

### **SO3324 Cultural Anthropology**

A one-semester course, three credit hours. An introduction to the cultural diversity of contemporary humans. Subsistence, marriage, kinship, political organizations, religion and philosophy of selected non-European peoples to be studied with a special emphasis on the North American Indian and the Eskimo. Three class hours per week.

### **SO3331 Marriage and the Family**

A one-semester course; three credit hours. The main focus of this course is the investigation of the physiological, psychological and sociological aspects of human sexuality, interpersonal communication and relationships, marriage, divorce and alternative forms of family living. Three class hours per week.

### **SO3333 Contemporary Social Problems**

A one-semester course; three credit hours. An analysis of the relationship between social structure and social problems in contemporary society. The course will emphasize: 1) the interdependence of all social problems; 2) the interaction between our institutional forms and social problems; and 3) the relationship between values and social action. Previous exposure to social science courses desirable but not required. Three class hours per week.

### **SO3343 Juvenile Delinquency**

A one-semester course; three credit hours. This course will concern itself with an in-depth study of juvenile delinquency: its various causes, the sociological impact on the community, as well as present rehabilitative efforts which attempt to cope with this contemporary problem. May not be offered every semester. Three class hours per week.

**Prerequisite: SO3321**

## **SO3353 Introduction to Criminology**

A one-semester course; three credit hours. A survey of the patterns and evolution of adult criminal and juvenile delinquent behavior analyzed in terms of various theories of such behavior; administration of criminal justice; police, law, courts (including juvenile courts) and prisons. Three class hours per week.

### **SO3999 Special Topics in Sociology**

A one-semester course; one to four credit hours. Directed readings, directed research, seminar or class in specific topics in discipline. The procedures to be followed and approval forms are available in the Registrar's office. Outlines for completed courses may be requested from the Registrar.

### **SO7510 Minority Groups: A Sociological Perspective**

A one-semester course; three credit hours. A survey of American minority groups. The concepts of racism, prejudice, discrimination marginality to be explored in the context of contemporary American society. May not be offered every semester. Three class hours per week.

## **Spanish: Liberal Arts**

### **SP4401/SP4402 Introductory Spanish I and II**

A two-semester course; three credit hours per semester. For students who have not completed two years of high school Spanish or the equivalent as determined by the college. Audiolingual emphasis. Introduction to grammatical patterns, reading and writing. Three class hours per week.

### **SP4421 Conversational Spanish I**

A one-semester course; three credit hours. Designed primarily for personnel in public service who need basic communication skills when dealing with speakers of Spanish only. Question/answer format: basic dialogue, pattern practice; specialized vocabularies to meet individual needs. Three class hours per week.

### **SP4422 Conversational Spanish II**

A one-semester course; three credit hours. Pattern practice, dialogues, question/answer format: specialized vocabularies to meet individual needs. Three class hours per week.

**Prerequisite: SP4421**

### **SP4423 Conversational Spanish III**

A one-semester course; three credit hours. This course is open to students who have completed an introductory Spanish college-level course. Question/answer format; dialogues; specialized vocabularies to meet specific needs; specialized writing skills introduced. Conducted in Spanish.

### **SP4424 Conversational Spanish IV**

A one-semester course; three credit hours. Question/answer format; specialized writing skills; specialized vocabularies to meet specific needs. Conducted in Spanish.

**Prerequisite: SP4423 or equivalent**

### **SP4451/SP4452 Intermediate Spanish I and II**

A two-semester course, three credit hours per semester. For students who have completed two or more years of high school Spanish or the equivalent as determined by the college, or who have completed SP4401 and SP4402. A continued study of language skills, emphasizing the development of reading ability. Three class hours per week.

### **SP4461/SP4462 Review and Progress in Spanish I and II**

A two-semester course; three credits per semester. A review of basic structure, verbs, and related essentials. Intended for native speakers, Hispanic students, majors and non-majors. Strengthens skills in speaking, reading, and writing. Vocabulary and pronunciation improvement; short compositions. Reading and discussion of selected short stories, poetry and folklore. Course tailored to meet individual needs.

**Prerequisite: SP4401 and SP4402 or permission of instructor**

### **SP0000 Special Topics in Spanish**

A one-semester course; one to four credit hours. Directed readings, directed research, seminar or class in specific topics of discipline. The procedures to be followed and approval forms are available in the Registrar's office.

## **Theatre: Liberal Arts**

### **TH0000 Special Topics in Theatre**

A one-semester course; one to four credit hours. Directed readings, directed research, seminar or class in specific topics in discipline. The procedures to be followed and approval forms are available in the Registrar's office.

### **TH7765 Introduction to Theatre**

A one-semester course; three credit hours. This course has two broad goals. First, to introduce dramatic theory: analysis of theatrical illusion, play analysis, audience analysis. Second, and equally important, to apply theory through performance: improvisation, oral reading, complete characteristics in a publicly performed play. Three class hours per week.

### **TH7769 Acting**

A one-semester course; three credit hours. A lecture-performance course designed to familiarize the student with basic acting techniques. Discussion and exercises explore the vocal, bodily, and psychological aspects of acting. Script analysis, characterization, and style studies follow. Three class hours per week.

### **TH7775 Fundamentals of Play Production: Directing**

A one-semester course; three credit hours. The methods and techniques of play production. Practical laboratory work, seminars and demonstrations. Lighting the stage, set construction, costume design and construction, make-up and other theatre related activities are performed and discussed. First-hand experience is gained by participating in aspects of play production. Three class hours per week.

### **TH7779 Reader's Theatre**

A one-semester course; three credit hours. The focus of this course is group interpretation of dramatized literature.

Emphasis is placed on use of the voice, criteria for selection or creation of materials, and rehearsal, staging, and performance techniques. Three class hours per week.

### **TH7785 Mime**

A one-semester course; three credit hours. The mime (or pantomime) expresses ideas and concepts using the body instead of the voice as a means of communication. Toward this end, classical mime technique is incorporated with exercises from improvisation and other disciplines. Readings and attendance at professional mime shows add background knowledge which enhances student performance. Three class hours per week.

### **TH7795 History of Theatre**

A one-semester course; three credit hours. A history of Western theatre from Greek to modern times. The focus of this course is on theatre architecture, production methods, acting styles, plays and the influences on playwriting in each period discussed. Three class hours per week.

## **Typewriting**

### **TW6621 Typewriting I**

A one-semester course; three credit hours. Foundation course to vocational typewriting. Development of correct basic typewriting skill. Introduction to short business and personal letters, tables, reports and other typewriting applications. Four class hours per week.

### **TW6622 Typewriting II**

A one-semester course; three credit hours. Development of requisite typing skill, experience and knowledge expected of a typist new to office employment. Development of ability to make basic editorial corrections and to type manuscripts, business forms, tabulations, and correspondence. Four class hours per week.

**Prerequisite: TW6621 or equivalent**

### **TW6631 Typewriting III**

A one-semester course; three credit hours. Extension of typewriting skill to higher performance levels. Emphasis on typing unfamiliar and unarranged kinds of materials. Statistical typing. Production typewriting. Four class hours per week.

**Prerequisite: TW6622 or equivalent**

### **TW6632 Typewriting IV**

A one-semester course; three credit hours. Mastery of ability to produce rapidly long manuscripts related to reports, magazine articles and speeches. Development of the ability to compose correspondence and edit the business writings of others. Production typewriting with the development of vocational rates of speed. Four class hours per week.

**Prerequisite: TW6631**

### **TW6641 Technical Typewriting**

A one-semester course, three credit hours. Correct use of spelling of scientific terminology. Development of skill in typing technical and engineering correspondence, reports, rough drafts, and manuscripts which contain various mathematical and chemical equations. Four class hours per week.

**Prerequisite: TW6631**

# Organizational Structure of the College

## PRESIDENT

John R. Dimitry.....	President of the College
Ruth Horton .....	Secretary
Julie Morris.....	Staff

## ASSISTANT TO THE PRESIDENT

Jack Wysong.....	Acting Assistant to the President
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## PUBLIC INFORMATION

Sheila B. Krim.....	Coordinator of Public Relations and Publications
Caryl Taylor .....	Secretary
Anne Duffy .....	Elder Aide

## ELDER AFFAIRS

Terri Cheetham .....	Acting Director of Elder Affairs
Clara Rich .....	Elder Aide

## FACILITIES

Elizabeth K. Jacobson .....	Facilities Coordinator
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## RESEARCH and PLANNING

Norman Landry .....	Director of Research and Development
Margaret Papia .....	Secretary

## STUDENT ADMINISTRATIVE SERVICES

Jack Warner.....	Acting Director of Student Administrative Services
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## ADMISSIONS

Jack Warner .....	Director of Admissions
Elizabeth Cole .....	Assistant Director of Admissions
Rita Richard .....	Secretary
Natalie Sorensen .....	Secretary

## COMPUTER SERVICES

Dwight Killam.....	Coordinator of Computer Services
Paul Conti .....	Programmer
Esther Tannian .....	Staff
Cheryl Trooper.....	Staff

## FINANCIAL AID and VETERANS

Patricia Garrett.....	Director of Financial Aid and Veterans Affairs
Deborah Woron .....	Secretary
John Reilly .....	Coordinator of Veterans Services

## REGISTRAR

Allen Fellsberto.....	Registrar
Bonnie Daniels .....	Assistant Registrar
Joyce Driscoll .....	Secretary
Priscilla Pope .....	Secretary
Nancy Sabin .....	Secretary

## ACADEMIC COUNCIL

Gerard Morin .....	Chairperson
--------------------	-------------

**DEAN OF THE COLLEGE**

Robert McDonald ..... Acting Dean of the College  
Mary Prunty ..... Acting Assistant Dean of the College  
Marion Regust ..... Secretary

**DEAN OF STUDENTS**

Churchill Stafford ..... Dean of Students  
Dorothy Holmes ..... Secretary

**COUNSELING**

Cecilia Furiotte ..... Director of Counseling  
Elizabeth Coyne ..... Counselor  
Richard LeClair ..... Counselor

**STUDENT ACTIVITIES**

Joseph Goldsmith ..... Director of Student Activities  
Barbara Knox ..... Secretary

**HANDICAPPED SERVICES**

Rubin Russell ..... Director of Handicapped Services  
Barbara Liberty ..... Staff Assistant

**PLACEMENT**

Richard Pastor ..... Director of Placement

**HEALTH SERVICES**

David Byrne, M.D. ..... College Physician  
Roger Gettner, M.D. ..... College Physician  
Marguerite Bagley, R.N. ..... Coordinator of Health Services

**COOPERATIVE EDUCATION**

Abbott Rice ..... Director of Cooperative Education

**CONTINUING EDUCATION and COMMUNITY SERVICES**

John Peroni ..... Dean of Continuing Education and Community Services  
Doris Ritter ..... Secretary  
Barbara Webber ..... Assistant Dean of Continuing Education and Community Services  
Nancy Brown ..... Secretary  
Martha Palsner ..... Counselor  
Harriet Somers ..... Staff

**C.E.T.A. PROGRAMS**

Stephen Brown ..... Director of C.E.T.A. Programs

# ACADEMIC DIVISIONS and DEPARTMENTS

## DIVISION OF BUSINESS

Olga Williams, Chairperson

Department of Business Administration

Donald Horgan, Chairperson

Department of Office & Business Education

Katherine Richards, Chairperson

Medical Record Technology Program

Patricia Taglianetti, Coordinator

## DIVISION OF HEALTH PROFESSIONS

William Taglianetti, Chairperson

Department of Nursing

Dolores Haritos, Chairperson

Evening Nursing Program

Amelia Anderson, Director

Department of Allied Health Technology

Eileen Bateman, Chairperson

Radiologic Technology Program

Christie Armstrong, Director

Respiratory Therapy Technology Program

John Carver, Coordinator

## DIVISION OF HUMAN SERVICES

Paul Bevilacqua, Chairperson

Early Childhood Education Program

Judith Tye, Coordinator

Criminal Justice Program

John DeLeo, Coordinator

Security Program

Robert Reinertson, Coordinator

Educational Assistant/Language Communication

Lizette Kaplowitz, Coordinator

Gerontology Programs

William O'Rourke, Coordinator

Mental Health Technology Program

Mary DiGiovanni, Coordinator

Deafness Communications

Clifford Lawrence, Coordinator

House Manager Program

Joseph Laudan, Coordinator

Department of Sport and Leisure Studies

Carleton Beal, Chairperson

Jack Hess, Director

Athletics

## DIVISION OF HUMANITIES & COMMUNICATIONS

Charles Reilly, Chairperson

Department of Foreign Languages

Jack Aronson, Chairperson

Department of Communications

Department of Philosophy & Fine Arts

## DIVISION OF INSTRUCTIONAL DEVELOPMENT

Kenneth Smith, Acting Chairperson

Learning Resource Center

Kenneth Smith, Acting Director

Patricia Parker, Coordinator of Public Services

Louise Bevilacqua, Art Collection Supervisor

Susan Towne, Coordinator of Technical Services

Michel Glennon, Ass't Coor. of Technical Services

Susan Bengtson, Audio/Visual Technician

James Hellesen, Television Technician

Charles Lombardo, Laboratory Technician

Patricia Smith, Switchboard/Receptionist

Glenna Bier, Switchboard

English as a Second Language Program

Discovery Program

Kenneth Smith, Director

Gerald Morin, Faculty Coordinator

Learning Laboratory Skills Center

## DIVISION OF MATHEMATICS, SCIENCE AND TECHNOLOGY

Corinne Grise, Acting Chairperson

Department of Mathematics

Tung-Shan Chang, Chairperson

Department of Natural Science

Robert Paul, Chairperson

Department of Engineering and Technical Studies

Michael Pelletier, Chairperson

## DIVISION OF SOCIAL SCIENCES

Usha Sellers, Acting Chairperson

Department of History and Government

Elizabeth Wilcoxson, Chairperson

Department of Behavioral Sciences

Faith Flythe, Chairperson

**DEAN OF ADMINISTRATION**

John Palmucci..... Dean of Administration  
Pauline Brunault..... Secretary

**PERSONNEL**

Stephen Fabbrucci ..... Director of Personnel  
Catherine A. Rockwell ..... Secretary

**BUSINESS OFFICE**

Joseph Brown ..... Comptroller  
Judith Gerald ..... Junior Accountant  
Ilene Sirols ..... Junior Accountant  
Helen Torrey ..... Junior Accountant  
Bessie McDonnell ..... Principle Bookkeeper  
Christine Ambrose ..... Bookkeeper  
Laurie Perkins ..... Bookkeeper  
Stephen Wrenn ..... Bookkeeper  
Patricia Forrest ..... Staff  
Susan King ..... Staff  
Elaine Kosta ..... Staff

**GRAPHICS**

Edward Fice ..... Coordinator of Graphics

**BUILDINGS and GROUNDS**

Ronald Sevigny ..... Superintendent of Buildings and Grounds  
Phyllis Ferrante ..... Secretary  
Raymond O'Connell ..... Maintenance Foreman  
Roland Beaudoin ..... Storekeeper  
Arthur Dufour ..... Central Mailing Room Clerk

**MAINTENANCE**

Walter Arsenault	
Barbara Berube	Loretta Grassi
Clifford Clarke	Carmen Grillo
Edward Comeau	Robert Iota
Sam Disalvo	Vito LaSorsa
Michael Follansbee	Edward Rurak
John Giordini	James Yurk

**TRADES**

Alfred Arsenault	Mechanical Handyperson
Robert Calway	Refrigeration and Heating Mechanic
Andrew Dakers	Carpenter
Robert Dufour	Painter
Edward Dul	Groundskeeper
Charles Gates	Tractor Driver
Richard Helder	Electrician
Galtano Medolo	Plumber

**SECRETARIAL SUPPORT CENTER**

Cathy Adams ..... Center Coordinator  
Judith Brown ..... Staff  
Claire Langley ..... Staff  
Bertha Wedgewood ..... Staff

# Professional Staff

Charles L. Adie .....	Associate Professor, Mathematics
B.S., University of Notre Dame; M.A., Boston College	
Jeanette M. Allen .....	Instructor, Nursing
Nursing Diploma, Chestnut Hill Hospital; R.N., B.A., Barrington College; M.S., Boston University	
Vincent L. Alsfeld .....	Professor, Business Administration
A.B., Brown University; M.B.A., University of Rhode Island; C.P.A.	
Amelia Anderson .....	Coordinator, Evening Nursing Program
Certified Adult Nurse Practitioner; M.S., University of Lowell	
David Antaya .....	Coordinator of Intramurals, Department of Sport and Leisure Studies
B.S., University of Massachusetts; M.A., University of Northern Colorado	
Christie Armstrong .....	Instructor, Radiologic Technology
R.R.T.; A.S., Middlesex Community College; B.S., University of Northern Arizona	
Elizabeth Arnold .....	Associate Professor, Communications
A.A., Blackburn College; B.S.Ed., Illinois State University; M.A., University of Iowa	
Ernest W. Arnold, Jr. .....	Professor, Engineering and Technical Studies
B.S.E.E., M.S.E.E., Worcester Polytechnic Institute	
Jack L. Aronson .....	Chairperson, Department of Foreign Languages
A.B., A.M., Boston University; B.J.Ed., Hebrew Teacher's College; A.M.T., Harvard University; Ed.D., Boston University	
George H. Bailey .....	Assistant Professor, Communications
A.B., M.A., Boston College; Ph.D., University of Wisconsin	
Wynne B. Bascom .....	Associate Professor, Business Administration
A.B., Tufts University; M.B.A., Babson Institute	
Eileen J. Bateman .....	Chairperson, Department of Health Technology
Nursing Diploma, Brooklyn State Hospital; R.N.; B.S., M.A., New York University	
Ellen H. Bayley .....	Clinical Instructor, Nursing
R.N.; B.S.N., University of Connecticut	
Carleton L. Beal, Jr. ....	Chairperson, Department of Sport and Leisure Studies
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Mildred Beaton .....	Assistant Professor, Office and Business Education
B.S., Salem State College	
Priscilla B. Bellairs .....	Instructor, Communications
B.A., Michigan State University; M.A., Harvard University	
Paul M. Bevilacqua .....	Chairperson, Division of Human Services
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Eugene E. Boles .....	Associate Professor, Philosophy and Fine Arts
B.A., M.F.A., University of Oregon	
Paula A. Boxer .....	Instructor, Communications
A.B., Jackson College; A.M., Boston University	
James P. Bradley .....	Instructor, Behavioral Sciences
B.A., M.Ed., Salem State College	
Gabriel Brahm .....	Professor, Communications
B.A., Columbia University; M.A., University of Minnesota	
Eric Branscomb .....	Coordinator, Writing Center
B.A., Case Western Reserve University; M.A., Youngstown State University	
Patricia Brennan .....	Instructor, Natural Sciences
B.S., Tufts University; M.S., Georgetown University	
James Brown .....	Assistant Professor, Mathematics
B.S., University of Delaware; A.M., Boston University	
Joseph H. Brown .....	Comptroller
B.S., College of the Holy Cross; M.B.A., Suffolk University	

<b>Stephan M. Brown</b>	.....	Director of C.E.T.A. Programs
B.A., Southeastern Massachusetts University; M.A., University of Rhode Island		
<b>Priscilla Calra</b>	.....	Instructor, Engineering and Technical Studies
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<b>Dyer Carroll</b>	.....	Instructor, Engineering and Technical Studies
B.S.M.E., Tufts University; M.S.M.E., Northeastern University		
<b>John H. Carver, Jr.</b>	.....	Coordinator, Respiratory Therapy Technology Program
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<b>Eugene F. Connolly</b>	.....	Professor, Communications
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<b>Donald R. Conway</b>	.....	Professor, Foreign Languages
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<b>Glee M. Corsetti</b>	.....	Instructor, Respiratory Therapy
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<b>Elizabeth R. Coyne</b>	.....	Counselor
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<b>Howard W. Crowell</b>	.....	Assistant Professor, Communications, Foreign Languages
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<b>John P. DaLeo</b>	.....	Coordinator, Criminal Justice Programs
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<b>Edward A. DeSchuytner</b>	.....	Assistant Professor, Natural Sciences
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<b>J. Alphee Desjardins</b>	.....	Associate Professor, Natural Sciences
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<b>Sandra DeVillis</b>	.....	Instructor, Behavioral Sciences
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<b>Mary DiGiovanni</b>	.....	Coordinator, Mental Health Technology Program
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<b>John R. Dimitry</b>	.....	President of the College
B.S., M.Ed., D.Ed., Wayne State University		

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Robert Downing .....	Instructor, Business Administration
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Theodore Dydowicz .....	Instructor, Business Administration
B.S., University of Massachusetts; M.S., Syracuse University	
Bruce E. Earnley .....	Assistant Professor, Mathematics
B.S., M.A., Ph.D., Wayne State University	
Alfred C. Emerson, Jr. .....	Professor, Business Administration
B.S., M.B.A., Northeastern University	
Stephen W. Fabbrucci .....	Director of Personnel
B.B.A., University of Notre Dame; M.B.A., Boston College	
Allen A. Felisberto .....	Registrar
A.S., Bristol Community College; B.A., University of Massachusetts; M.A., University of Rhode Island	
Michael G. Finegold .....	Assistant Professor, Philosophy and Fine Arts
B.A., Brooklyn College; M.A., M.M.A., Yale University	
John Finneran .....	Professor, Natural Sciences
A.B., Ed.M., Harvard University	
James H. Flisk .....	Professor, Engineering and Technical Studies
B.S., University of Illinois; M.Ed., Salem State College	
Peter Flynn .....	Instructor, Behavioral Sciences
B.A., Boston University; M.A., University of New Mexico; M.Ed., Rhode Island College	
Faith G. Flythe .....	Chairperson, Department of Behavioral Sciences
A.B., Randolph-Macon Women's College; M.A., University of Arizona	
Sandra D. Fotinos .....	Director, Program for non-English-Speaking Students
A.B., Wellesley College; M.A.T., Johns Hopkins University	
Susan Freundlich .....	Counselor
B.A., M.A., Denver University	
Cecilia M. Furlotte .....	Director of Counseling
B.A., M.Ed., Boston University	
Patricia Garrett .....	Director of Financial Aid
B.S., M.A., Boston State College	
Karen Gladstone .....	Instructor, Mathematics and Natural Sciences
B.A., Vassar College; M.A., Boston University School of Medicine	
Joseph Goldsmith .....	Director of Student Activities
A.A., Northern Essex Community College; B.A., University of New Hampshire; M.Ed., Northeastern University	
Merrill Goldstein .....	Instructor, Respiratory Therapy
M.D., Tufts University	
Corinne D. Grise .....	Acting Chairperson, Division of Mathematics, Science and Technology
A.B., Regis College; M.S.T., University of New Hampshire; Ed.D., Nova University	
John Guarino .....	Professor, History and Government
B.A., Brandeis University; M.A.; Doctoral Candidate in History, University of Michigan	
James Walter Gustafson .....	Professor, Philosophy and Fine Arts
A.B., Wheaton College; B.D., Fuller Theological Seminary; Ph.D., Boston University	
Thelma L. Halberstadt .....	Assistant Professor, Nursing
R.N.; B.S., Plattsburgh State Teacher's College; M.S., University of Rhode Island	
John Hallowell, Jr. .....	Instructor, Communications
B.A., Harvard College; M.F.A., Trinity University	

<b>Makoto Harada</b> .....	Instructor, Philosophy and Fine Arts
B.A., Northwest Nazarene College; B.D., Nazarene Theological Seminary; Th.M. Harvard University; Ph.D., Boston University	
<b>Mary A. Harada</b> .....	Professor, History and Government
B.S., A.M., Ph.D., Boston University	
<b>Phyllis Hare</b> .....	Instructor, Medical Record Technology
B.S., Cornell University; M.S., Southern Connecticut State University	
<b>Dolores Haritos</b> .....	Chairperson, Department of Nursing
R.N.; B.S., M.S., Ed.M., Boston University	
<b>Timothy D. Haven</b> .....	Instructor, Philosophy and Fine Arts
B.A., University of South Carolina; M.F.A., Cranbrook Academy of Art	
<b>Chester W. Hawrylciw</b> .....	Assistant Professor, History
B.S., Springfield College; M.A., University of California	
<b>Richard Heath</b> .....	Instructor, Behavioral Sciences
B.A., The American University; M.A., Bridgewater State College	
<b>James C. Hellesen</b> .....	Technical Director of Television
A.S., Grahm Junior College; B.A., Worcester State College	
<b>M. Jack Hess</b> .....	Assistant Professor, Sport and Leisure Studies; Director of Athletics
B.S., University of Dayton; M.Ed., Bowling Green University; Ed.S., Kent State University	
<b>George W. Hickey</b> .....	Associate Professor, Business Administration
B.S.B.A., Merrimack College; M.B.A., Northeastern University; J.D., Suffolk University	
<b>Gary Hochstetler</b> .....	Director of Clinical Education, Respiratory Therapy Program
R.R.I.; A.S., Northeastern University; A.A., Hesston College	
<b>H. Kenrick Holden, Jr.</b> .....	Associate Professor, Natural Sciences
B.S., Bates College; M.S., University of Maine	
<b>Eleanor Hope-McCarthy</b> .....	Associate Professor, Communications
A.B., A.M., University of Michigan	
<b>Donald G. Horgan</b> .....	Associate Professor, Business Administration
B.S., Milligan College; M.Ed., Salem State College	
<b>Bernard Horn</b> .....	Assistant Professor, Communications
S.B., Massachusetts Institute of Technology; Ph.D., University of Connecticut	
<b>Norman J. Landry</b> .....	Director of Research and Development
B.S.Ed., State College at Bridgewater; Ed. M., Salem State College; M.A., Rutgers University	
<b>Elizabeth Jacobson</b> .....	Facilities Coordinator
<b>Paul Jarvis</b> .....	Assistant Professor, Behavioral Sciences
A.B., M.Ed., Boston University	
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